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Canadian Website: <http://lg.ca>

ELECTRIC & GAS DRYER SERVICE MANUAL

CAUTION

READ THIS MANUAL CAREFULLY IN ORDER TO
PROPERLY DIAGNOSE PROBLEMS AND TO SAFELY
PROVIDE QUALITY SERVICE ON THESE DRYERS.

MODEL :	DLEX5101W	DLGX5102W
	DLEX5101V	DLGX5102V
	DLEX5170W	DLGX5171W
	DLEX5170V	DLGX5171V



LG Electronics Inc.

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IMPORTANT SAFETY NOTICE

The information in this service guide is intended for use by individuals possessing skill and experience in electrical, electronic, and mechanical appliance repair. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

WARNING !

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks. To reduce the risk of personal injury, adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses. Failure to follow all of the safety warnings in this manual could result in property damage, personal injury or death.

RECONNECT ALL GROUNDING DEVICES

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

WHAT TO DO IF YOU SMELL GAS:

- *Do not try to light a match, or cigarette, or turn on any gas or electrical appliance.*
- *Do not touch any electrical switches. Do not use any phone in your building.*
- *Clear the room, building or area of all occupants.*
- *Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions carefully.*
- *If you cannot reach your gas supplier, call the fire department.*

IMPORTANT

Electrostatic Discharge (ESD) Sensitive Electronics

ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

- Use an anti-static wrist strap. Connect wrist strap to green ground connection point or unpainted metal in the appliance.

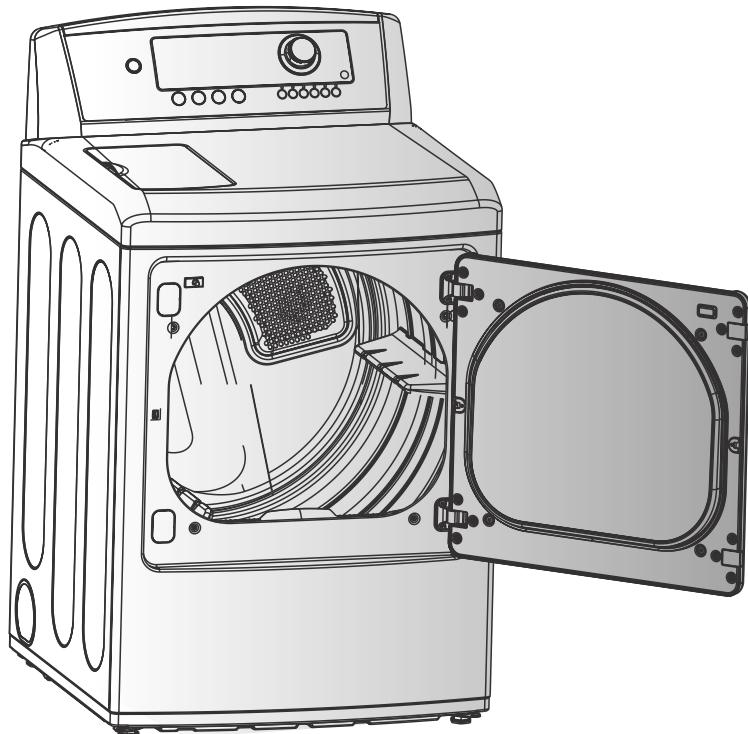
- OR -

Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.

- Before removing the part from its package, touch the anti-static bag to a green ground connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.
- When repackaging failed electronic control assembly in anti-static bag, observe above instructions.

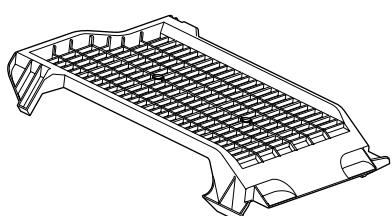
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- Name: Electric and Gas Dryer
- Power supply: Refer to the rating label on the dryer.
Gas: 120 VAC Electric: 240VAC
- Size: 27 X 28.9 X 45.3 (inch)
- Dryer capacity: IEC 7.3 cu.ft.
- Weight: 133.2 (lbs)

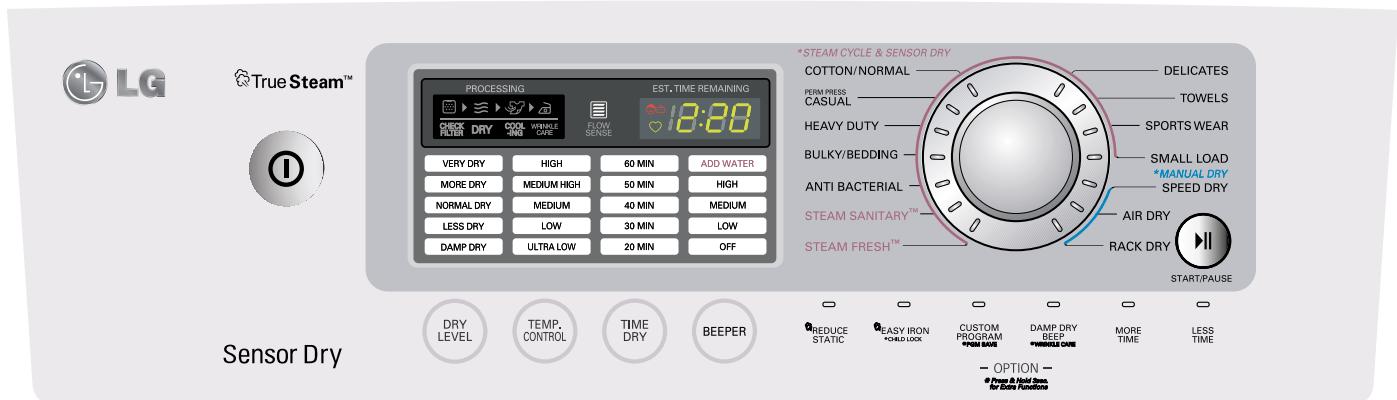
Specifications are subject to change by manufacturer.

■ ACCESSORIES

Dryer rack (1 each)

See page 6 of this manual for usage instruction.

ITEM		DLEX5101W DLEX5101V DLEX5170W DLEX5170V	DLGX5102W DLGX5102V DLGX5171W DLGX5171V	REMARK
Material & Finish	Color	Blue White / Stainless Silver		
	Top Plate	Powder coating		
	Door Trim	Spray		
Power Supply	Elec.	120 V / 240 V / 60 Hz (26 A)		
		120 V / 208 V / 60 Hz (23 A)		
	Gas	120 V / 60 Hz (11.5 A)		
Power Consumption	Motor	250W (4.5A)		AC 120V
	Heater	5400W (22.5A)		AC 240V(Electric Model)
	Lamp	15 W (0.2A)		DC 12V
	Gas Valve	13 W (0.11A) x 2		DC 120V(Gas Model)
	AG Heater	1100W (9.2A)		DC 120V(Steam Model)
	Pump	2.4W (0.15A)		DC 9V(Steam Model)
Control Type		Electronic		
Drum Capacity		7.3 cu.ft.		
Weight (lbs) - Net		133.2		
No. of Programs		14		
No. of Dry Options		6		
No. of Temperature Controls		5		
No. of Dry Levels		5		
Sound levels		3		
Sensor	Moisture	Available		Electrode sensor
	Temperature	Available		Thermistor
Reversible Door		Available		
Drum		Stainless Steel		
Dryer Rack		Available		
Child Lock		Available		
Interior Light		Available		
Product (WxDxH)		27 x 28.9 x 45.3 (inch)		
Packing (WxDxH)		29.8 x 31.3 x 47.24 (inch)		



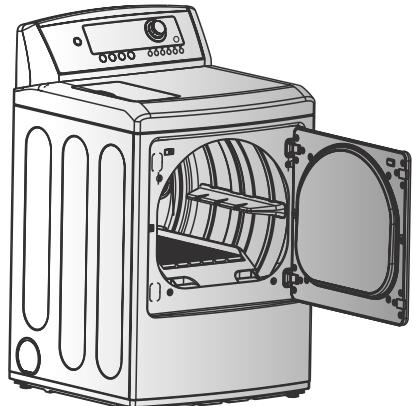
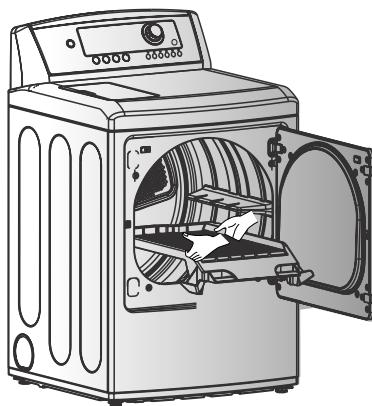
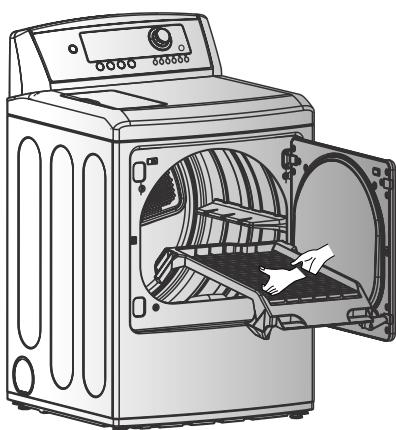
Sensor Dry

Dryer Rack Installation Instructions

1 Open the door.
Hold the dryer rack
with both hands.

2 Put the dryer rack into
the drum

3 Check and be sure that the
front of the rack is properly
seated behind the lint filter.



Review the following options to determine the appropriate electrical connection for your home:



**4-wire receptacle
(NEMA type 14-30R)**

Use the instructions under option 1 if your home has a 4-wire receptacle (NEMA type 14-30R).

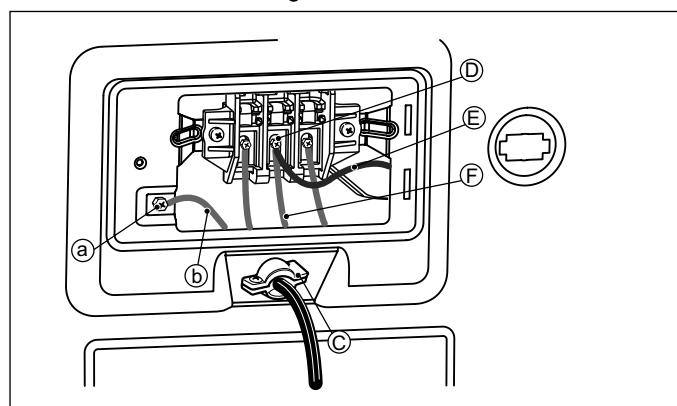
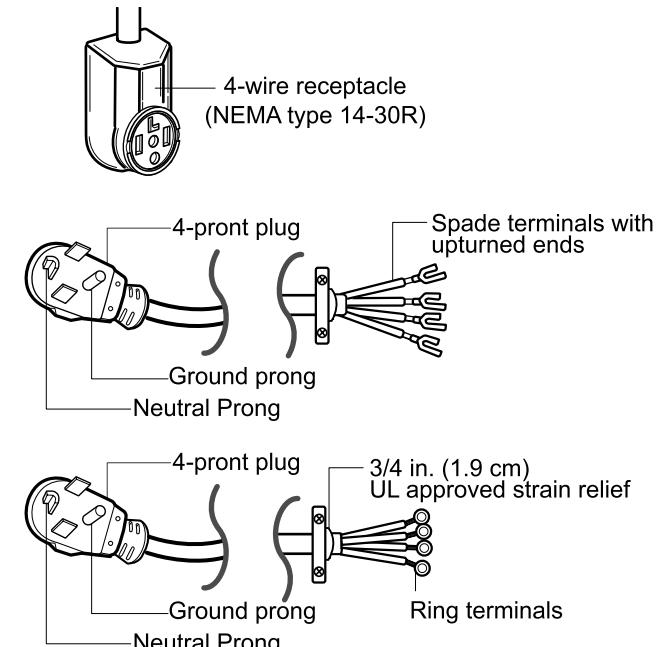


**3-wire receptacle
(NEMA type 10-30R)**

Use the instructions under option 2 or 3 if your home has a 3-wire receptacle (NEMA type 10-30R). Use option 2 if local codes and ordinances permit the connection of a chassis ground to the neutral connector. If this is not permitted, use option 3.

Option 1: 4-wire connection with a Power supply cord.

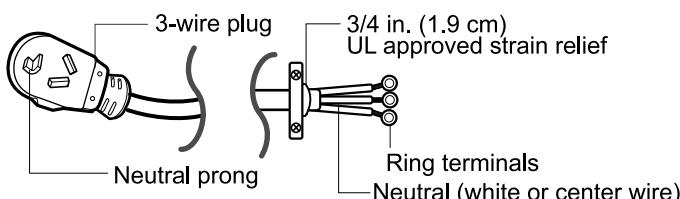
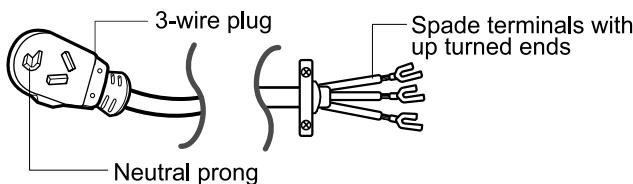
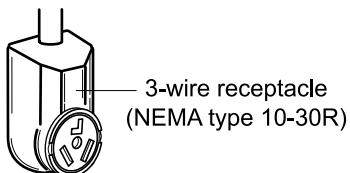
- If your local codes or ordinances do not allow the use of a 3 wire connection, or you are installing your dryer in a mobile home, you must use a 4-wire connection.



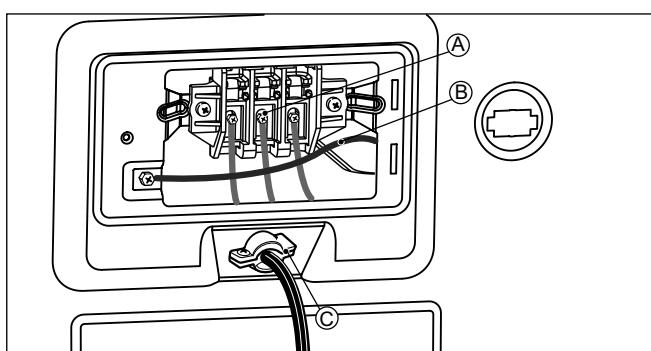
1. Connect the neutral wire (white) of the power cord to the center terminal block screw.
2. Connect the red and black wires to the left and right terminal block screws.
3. Connect the ground wire (green) of the power cord to the external ground screw. Remove the neutral ground wire of appliance and connect it to center screw.
4. Make sure that the strain relief screw is tightened and that all terminal block nuts are tight and the power cord is in the right position.

Option 2: 3-Wire Connection with a Power Supply Cord

If your local codes or ordinances permit the connection of a frame-grounding conductor to the neutral wire, use these instructions. If your local codes or ordinances do not allow the connection of a frame-grounding conductor to the neutral wire, use the instructions under **Section 3: Optional 3-wire connection.**



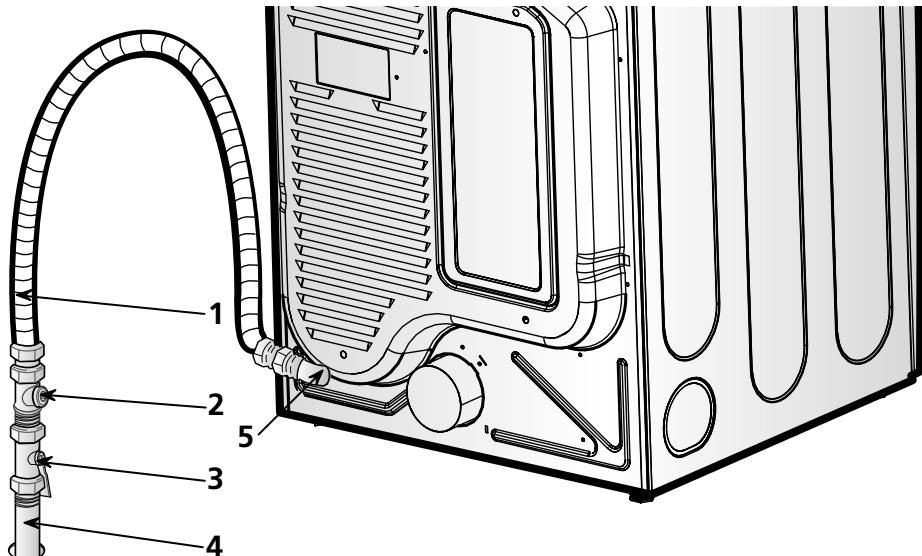
1. Connect the neutral (white or center) wire (B) to the center, silver colored, screw (A) and tighten securely.
2. Connect the other two power cord wires (red and black) to the left and right terminal block screws and tighten securely.
3. Tighten the strain relief screws (C) securely.



3-2. Connect Gas Supply Pipe (Gas Dryer ONLY)

For further assistance, refer to section on **Gas Requirements**.

1. Make certain your dryer is equipped for use with the type of gas in your laundry room. Dryer is equipped at the factory for natural gas with a $\frac{3}{8}$ " N.P.T. gas connection.
2. Remove the shipping cap from the gas connection at the rear of the dryer. Make sure you do not damage the pipe thread when removing the cap.
3. Connect to gas supply pipe using a new flexible stainless steel connector.
4. Tighten all connections securely. Turn on gas and check all pipe connections (internal & external) for gas leaks with a non-corrosive leak detection fluid.
5. For LP (Liquefied Petroleum) gas connection, refer to section on Gas Requirements.



- 1 New Stainless Steel Flexible Connector
 - Use only if allowed by local codes (Use Design A.G.A. Certified Connector)
- 2 $\frac{1}{8}$ " N.P.T. Pipe Plug (for checking inlet gas pressure)
- 3 Equipment Shut-Off Valve-Installed within 6' (1.8 m) of dryer

- 4 Black Iron Pipe
 - Shorter than 20' (6.1 m) - Use $\frac{3}{8}$ " pipe
 - Longer than 20' (6.1m) - Use $\frac{1}{2}$ " pipe
- 5 $\frac{3}{8}$ " N.P.T. Gas Connection

Cycle		Default			Conditions of operation and termination						
		Temp- erature	Dry Level	Display time	Drying		Cooling		Wrinkle care		
					Electro- sensor	Temp- Control	Default time	Temp- Control**	Time		
Sensor Dry *	STEAM FRESH™	HIGH	Off	20min	Saturation	66 \pm 4°C 151 \pm 7°F	5min	47 \pm 5°C 113 \pm 9°F	3Hr		
		MEDIUM									
	STEAM SAINTARY™	HIGH	Off	39min	Saturation	68 \pm 4°C 155 \pm 7°F	5min				
	ANTIBACTE- RIAL	HIGH	Very Dry	70min	Saturation	68 \pm 4°C 155 \pm 7°F	5min				
	BULKY/ BEDDING	MEDIUM	Normal Adjustable	55min	Saturation	60 \pm 4°C 140 \pm 7°F	5min				
	HEAVY DUTY	HIGH	Normal Adjustable	54min	Saturation	68 \pm 4°C 155 \pm 7°F	5min				
	PERM PRESS CASUAL	LOW	Normal Adjustable	36min	Saturation	52 \pm 3°C 126 \pm 5°F	5min				
	COTTON/ NORMAL	MEDIUM	Normal Adjustable	41min	Saturation	60 \pm 4°C 140 \pm 7°F	5min				
	DELICATES	LOW	Normal Adjustable	32min	Saturation	52 \pm 3°C 126 \pm 5°F	5min				
	TOWELS	MEDIUM HIGH	Normal Adjustable	55min	Saturation	66 \pm 4°C 151 \pm 7°F	5min				
Manual Dry **	SMALL LOAD	HIGH	Normal Adjustable	30min	Saturation	68 \pm 4°C 155 \pm 7°F	5min	47 \pm 5°C 113 \pm 9°F	3Hr		
	SPORTS WEAR	MEDIUM	Normal Adjustable	27min	Saturation	60 \pm 4°C 140 \pm 7°F	5min				
	SPEED DRY	HIGH	Off	25min	Saturation	(68 \pm 4°C) (155 \pm 7°F)	5min				
	AIR DRY	NO HEAT	Off	30min	Saturation	NO HEATER	5min	(47 \pm 5°C) (113 \pm 9°F)			
	RACK DRY	LOW EXTRA LOW	Off	50min	Saturation	(52 \pm 3°C) (126 \pm 5°F)	5min	N/A			
Load			Motor							Off Time: 6min	
			Heater		Temperature Control for each cycle					On Time: 10sec	

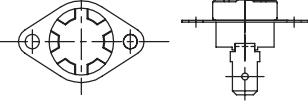
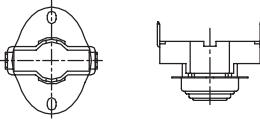
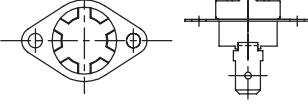
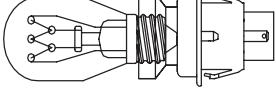
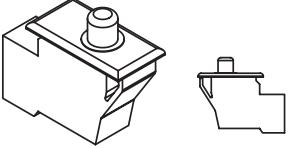
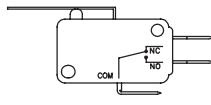
* Sensor dry: Dry Level is set by users.

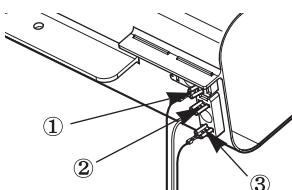
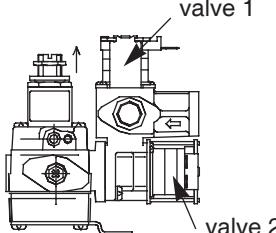
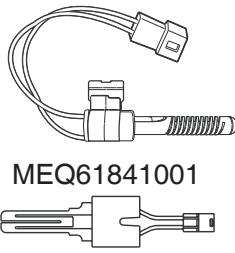
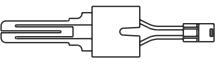
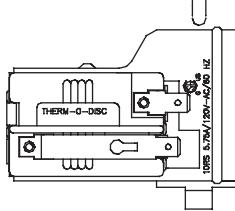
** Manual dry: Temperature control is set by users.

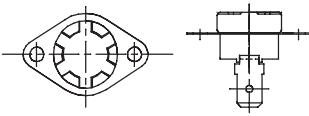
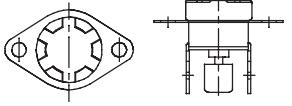
Default settings can be adjusted by users.

CAUTION

When checking the Component, be sure to turn the power off, and do voltage discharge sufficiently.

Component	Test Procedure	Check result	Remark
 • Check Top Marking: N140	Measure resistance of terminal to terminal ① Open at $284 \pm 41^{\circ}\text{F}$ ($140 \pm 5^{\circ}\text{C}$) ② Auto reset -31°F (-35°C) Same shape as Outlet Thermostat.	If thermal fuse is open must be replace ① Resistance value $\approx \infty$ ② Continuity ($250^{\circ}\text{F} \downarrow$) $< 1\Omega$	• Heater case - Safety • Electric type
 • Check Top Marking: N140	Measure resistance of terminal to terminal ① Open at $257 \pm 9^{\circ}\text{F}$ ($125 \pm 5^{\circ}\text{C}$) ② Close at $221 \pm 9^{\circ}\text{F}$ ($94 \pm 7^{\circ}\text{C}$)	① Resistance value $\approx \infty$ ② Resistance value $< 5\Omega$	• Heater case - Hi limit • Electric type
 • Check Top Marking: N85	Measure resistance of terminal to terminal ① Open at $185 \pm 41^{\circ}\text{F}$ ($85 \pm 5^{\circ}\text{C}$) ② Close at $167 \pm 41^{\circ}\text{F}$ ($75 \pm 5^{\circ}\text{C}$) Same shape as Thermal cut off.	① Resistance value $\approx \infty$ ② Resistance value $< 5\Omega$	• Blow housing - Safety • Electric type
	Measure resistance of terminal to terminal	Resistance value: $80\Omega \sim 100\Omega$	
	Measure resistance of the following terminal 1) Door switch knob: open ① Terminal: COM - NC(1-3) ② Terminal: COM - NC (1-2) 2) Door switch push: push ① Terminal: COM - NC (1-3) ② Terminal: COM - NC (1-2)	① Resistance value $< 1\Omega$ ② Resistance value $\approx \infty$ ① Resistance value $\approx \infty$ ② Resistance value $< 1\Omega$	
	Measure resistance of the following terminal: COM - NC	1. lever open ① Resistance value $< 1\Omega$ 2. Lever push (close) ② Resistance value $\approx \infty$	

Component	Test Procedure	Check result	Remark
7. Heater 	Measure resistance of the following terminal ① Terminal: 1 (COM) - 2 ② Terminal: 1 (COM) - 3 ③ Terminal: 2 - 3	① Resistance value: 10Ω ② Resistance value: 10Ω ③ Resistance value: 20Ω	• Electric type
8. Thermistor 	Measure resistance of terminal to terminal Temperature condition: 58°F ~ 104°F (10~40°C)	Resistance value: 10Ω	• Heater case Hi limit • Electric type
9. Motor			• See Page 14
10. Gas valve 	Measure resistance of the following terminal ① Valve 1 terminal ② Valve 2 terminal	① Resistance value 2.3k~2.7kΩ ② Resistance value 2.3k~2.7kΩ	• Gas type
11. Igniter 5318EL3001  MEQ61841001 	Measure resistance from terminal to terminal.	Resistance value 50~800 Ω (for 5318EL3001) 40-150 Ω (for MEQ1841001)	• Gas type
12. Frame Detect 	Measure resistance of terminal to terminal ① Open at 370°F (Maximum) ② Close at 320°F	① Resistance value $\approx \infty$ ② Resistance value $< 1\Omega$	• Gas type

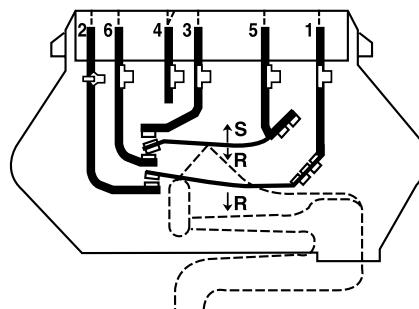
Component	Test Procedure	Check result	Remark
<p>13. Outlet Thermostat (Auto reset)</p>  <ul style="list-style-type: none"> • Check Top Marking: N95 	<p>Measure resistance of terminal to terminal</p> <p>① Open at $203 \pm 41^{\circ}\text{F}$ ($95 \pm 5^{\circ}\text{C}$) ② Close at $159 \pm 41^{\circ}\text{F}$ ($70 \pm 5^{\circ}\text{C}$)</p>	<p>① Resistance value $\doteq \infty$ ② Continuity $< 1\Omega$</p>	<ul style="list-style-type: none"> • Gas type • Gas funnel
<p>14. Outlet Thermostat (Manual reset)</p>  <ul style="list-style-type: none"> • Check Top Marking: N100 	<p>Measure resistance of terminal to terminal</p> <p>① Open at $230 \pm 41^{\circ}\text{F}$ ($110 \pm 5^{\circ}\text{C}$) ② Manual reset</p>	<p>① Resistance value $\doteq \infty$ ② Continuity $< 1\Omega$</p>	<ul style="list-style-type: none"> • Gas type • Gas funnel

NOTE When checking Component, be sure to turn Power off, then do voltage discharge sufficiently.

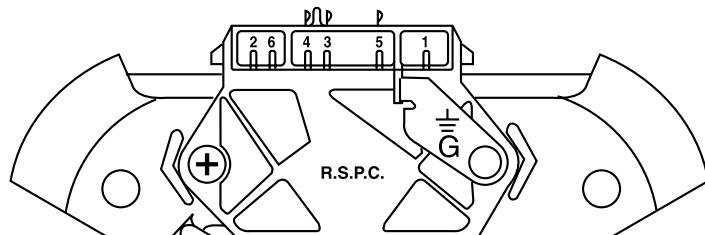
■ Contact On / Off by Centrifugal Switch

Terminal No		①	②	③	④	⑤	⑥	Remark
Mode	Resistance							
Motor STOP	2 ~ 3Ω				●	●		Motor
	∞	●	●					Heater (Electric Models)
	∞			●	●			Gas Valve (Gas Models)
Motor RUN	3 ~ 5Ω				●	●		Motor
	< 1Ω	●	●					Heater (Electric Models)
	< 1Ω			●		●		Gas Valve (Gas Models)

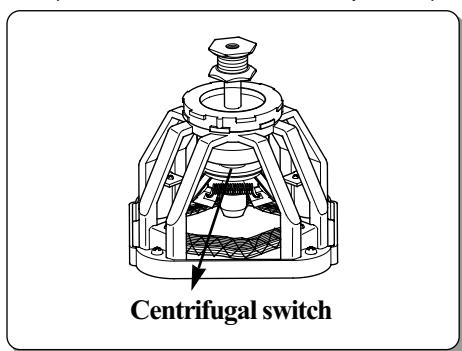
..... Open
— Close



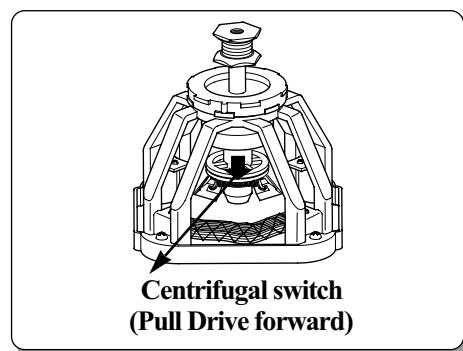
SWITCH SHOWN IN START POSITION



■ STOP MODE
(When Motor does not operate)



■ .RUN MODE
(Motor operates)

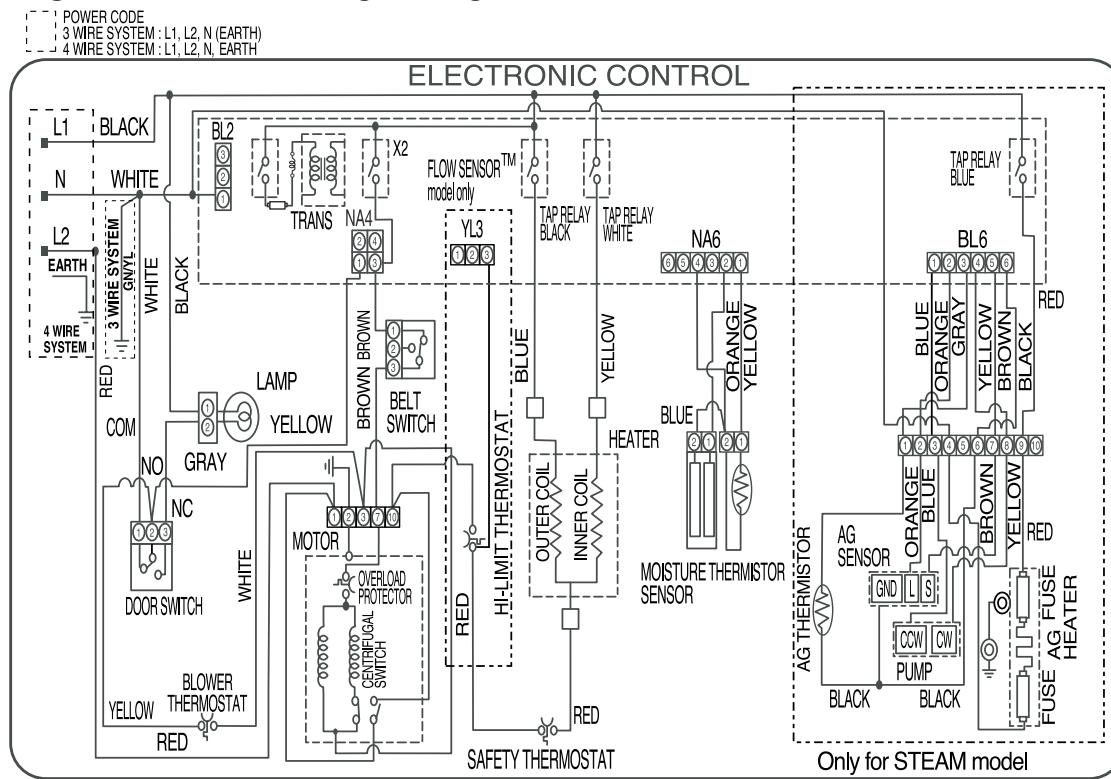


WIRING DIAGRAM

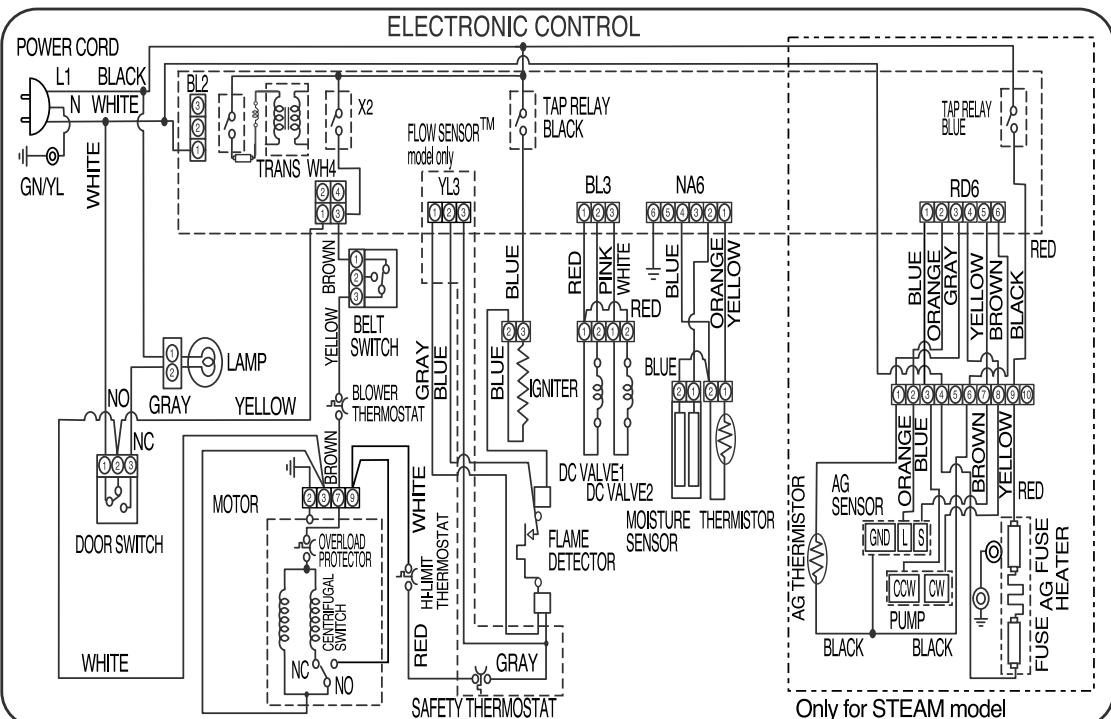
! CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

ELECTRIC DRYER WIRING DIAGRAM



GAS DRYER WIRING DIAGRAM



8-1. Steam Cycle Guide

	STEAM	DEFAULT TIME	TEMP. CONTROL	DRY LEVEL	FABRIC STATE	FABRIC TYPE	MAXIMUM AMOUNT
STEAMSANITARY™		39 minutes			Dry	Comforter Bedding Children's clothing	Single (1 each) 3 lbs.
STEAMFRESH™		20 minutes	O		Dry	Comforter Shirts*	Single (1 each) 5 each
	+ REDUCE STATIC	10 minutes Only reduce static			Dry	Shirts*	8 lbs. (18 Items.)
	+ EASY IRON	12 minutes			Dry		Shirts* (5 each)
HEAVY DUTY COTTON/TOWELS NORMAL PERM.PRESS DELICATES	+ REDUCE STATIC	Follow selected cycle		O	Wet	Follow selected cycle	8 lbs. (18 Items.)
	+ EASY IRON			O	Wet	Follow selected cycle	Shirts* (5 each)
TIME DRY	+ REDUCE STATIC	45 minutes	O		Wet	Follow selected temp	8 lbs. (18 Items.)
	+ EASY IRON	47 minutes	O		Wet	Follow selected temp	Shirts* (5 each)
Sports wear	+ EASY IRON	27 minutes			Wet	Sports wear	

*Shirt: 70% cotton/30% poly blend. Except especially delicate fabrics.

IMPORTANT NOTES ABOUT STEAM CYCLES:

- The steam feeder must be filled with water up to the MAX line. Otherwise, an error message will be displayed.
- If the lint filter or exhaust duct is clogged, the Steam options will not give proper results.
- For best results, load articles of similar size and fabric type.
Do not overload.
- Water only - Do not add any additives or other materials as these will damage your dryer.
- Before moving the dryer, make sure the steam feeder is empty.
- Best results are obtained with cotton/poly blend fabrics.

8-2. Troubleshooting for Steam Dryer

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
ADD WATER indicator light is on during the drying cycle	<ul style="list-style-type: none"> Water supply error. 	<ul style="list-style-type: none"> Check steam feeder drawer: <ul style="list-style-type: none"> (1) Make sure steam feeder is filled with water to MAX line. (2) Make sure steam feeder is seated properly and drawer is fully closed. (3) Turn the dryer off then restart the Steam cycle. Do not use distilled water; the water level sensor in steam generator will not work. Pump not working. Unplug dryer and call for service.
Water drips from orifice when Steam Cycle starts.	<ul style="list-style-type: none"> This is normal. 	<ul style="list-style-type: none"> This is steam condensation. The dripping water will stop after a short time.
Steam doesn't generate but no error code is shown.	<ul style="list-style-type: none"> Water level error. 	<ul style="list-style-type: none"> Unplug dryer and call for service.
Garments still wrinkled after STEAM FRESH™.	<ul style="list-style-type: none"> Too many or to different types of garments in dryer. 	<ul style="list-style-type: none"> Small loads of 1 to 5 items work best. Load fewer garments. Load similar-type garments.
There are no creases left on garment after STEAM FRESH™.	<ul style="list-style-type: none"> The function of this cycle is to remove wrinkles from fabric. 	<ul style="list-style-type: none"> Use an iron to make creases.
Garments have static after REDUCE STATIC.	<ul style="list-style-type: none"> This is normal. 	<ul style="list-style-type: none"> Depends on individual moisture level in skin.
Garments are too damp or too dry after REDUCE STATIC.	<ul style="list-style-type: none"> Correct drying options not selected. 	<ul style="list-style-type: none"> Select load weight manually before starting REDUCE STATIC option.
Garments are not uniformly damp after EASY IRON.	<ul style="list-style-type: none"> This is normal. 	<ul style="list-style-type: none"> Depends on the amount or type of garments.
Water drips from door during Steam Cycle.	<ul style="list-style-type: none"> This is normal. 	<ul style="list-style-type: none"> This is steam condensation on door surface.
Steam is not visible during Steam Cycle.	<ul style="list-style-type: none"> This is normal. 	<ul style="list-style-type: none"> Steam vapor is difficult to see when the door is closed.
Drum does not turn during Steam Cycle.	<ul style="list-style-type: none"> This is normal. 	<ul style="list-style-type: none"> The drum is turned off so that the steam vapor remains in the drum.

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
Cannot see steam vapor at the beginning of cycle.	• This is normal.	• Steam is released at different stages of the cycle for each option.
The display shows BULKY LOAD.	• MORE TIME button pressed.	• Pressing the MORE TIME button several times will set the cycle for a large load such as a comforter.
Odors remain in clothing after STEAM FRESH™.	• STEAM FRESH™ did not remove odor completely.	• Fabrics containing strong odors should be washed in a normal cycle.

8-3. Display Fault/Error Codes for Steam Dryer

The error codes below will be displayed when attempting to start a drying cycle, or after activating the Diagnostic Test mode.

DISPLAY	Checking Part	Cause	Remark
tE1	Thermistor of blower housing	• Thermistor open or shorted	• tE1 error is displayed in the drying cycle or test mode. • Replace the steam generator.
tE2			
dE	Door SW	• Door SW is abnormal. (Only TEST MODE)	• dE error is only displayed in the test mode.
PS	Wire Connection (Black-White-Red)	Wire Connection is wrong. Wire Connection is loose.	See the 7-9 page. Guidance of the wire connection. For only electric dryer. *PS : Power Supply
tE4	Thermistor of steam generator	• Steam generator thermistor open or shorted.	• tE4 error is only displayed in the test mode. • Replace the steam generator.
Add Water	Steam generator	• Sensors do not detect that steam generator is full within 60 seconds.	If water in the steam feeder is not enough this error may be displayed. Fill the feeder and restart the cycle.
E5	Water supply pump	• When the pump valve is less than 10 in the test mode	• E5 error is only displayed in the test mode. • Check the connection between harness wire and connector. • Replace the water supply pump.
EE	EE PROM Error	• EE PROM operation is abnormal.	• EE error is only displayed in the test mode.

9-1 Flow sensor

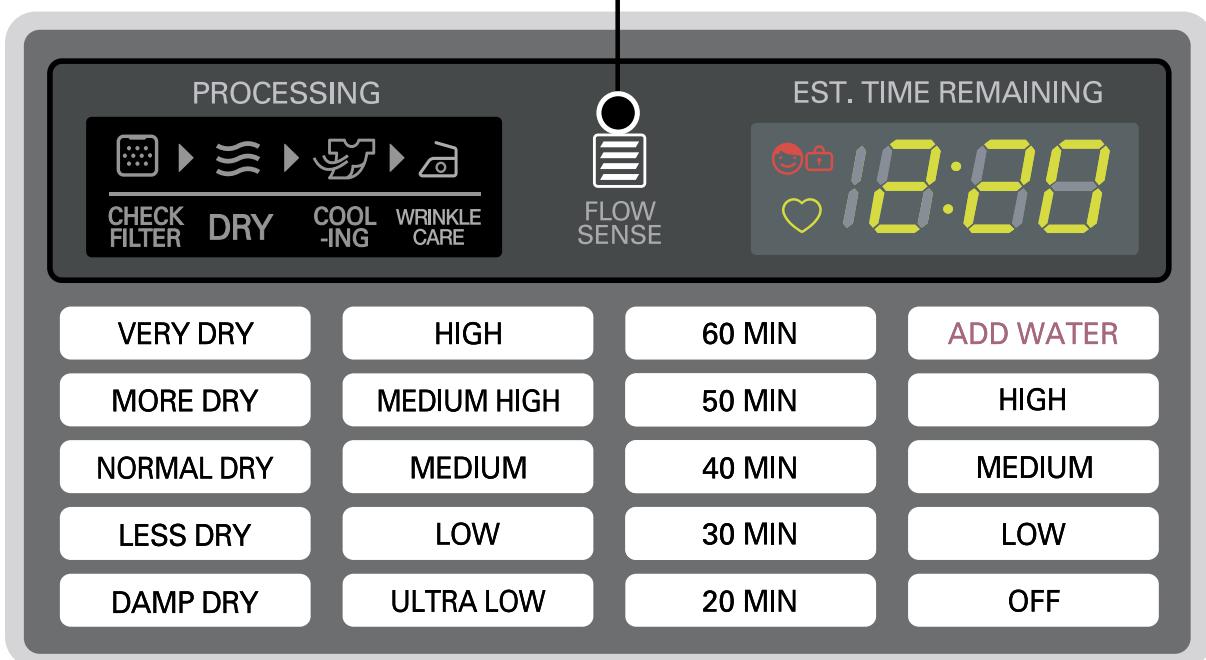
This FlowSense™ function detects the clogging or blocking of ducts.

Clogged duct vents or hoses decrease efficiency in drying clothes. Clogged vents can also cause fire.

This function alarms you, when to clean the ducts.

When the alarm about duct clogging is on display of the panel, your duct vents should be cleaned by yourself or serviceman.

Flow Sensor Function

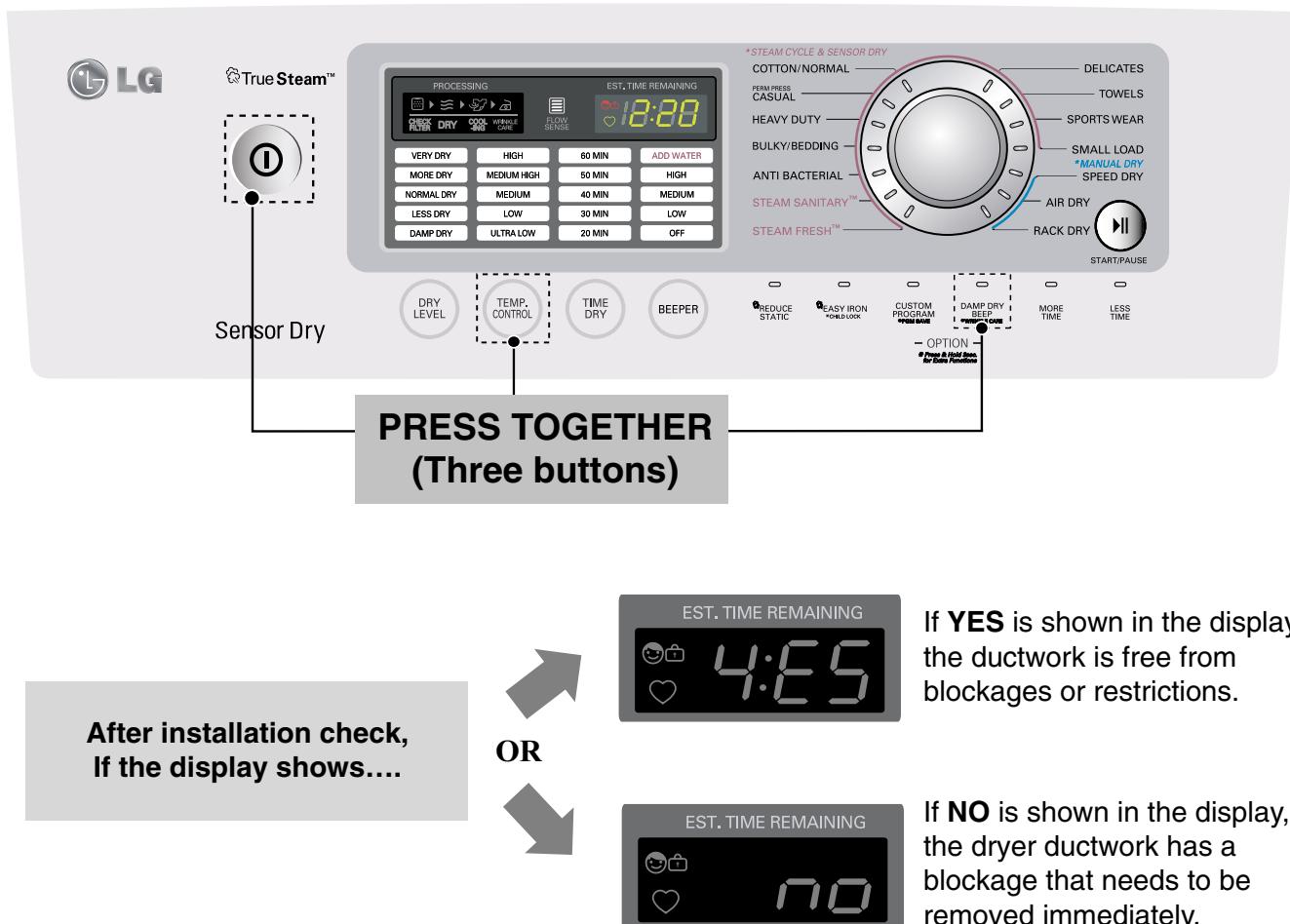


9-2 Installation check

This feature allows you to quickly verify that the exhaust system is adequate for the normal function of the dryer. The check takes only two minutes. The results of the check are displayed in the FlowSense display window as shown below

(Fig. 1). The dryer must be at room temperature for this test to be reliable. To perform this test, start the machine in standby mode (power off). Press and hold both the **DAMP DRY BEEP** and the **TEMP . CONTROL** buttons together while turning on the dryer with the **POWER** button i.e. Press together the three buttons **DAMP DRY BEEP + TEMP . CONTROL + POWER**. The dryer will start and run for 2 minutes while it checks temperatures. At the end of this short cycle, it will display the results as follows.

Fig.1



9-3 Troubleshooting for flow sensor dryer

1. FLOW SENSE indicator light is on

Is lint filter full?



Clean lint filter before every load



Is duct clogged?



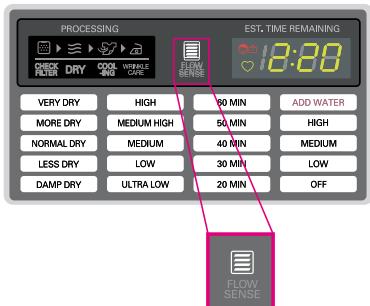
Check & clean duct.

2. FLOW SENSE indicator light is on and does not disappear.

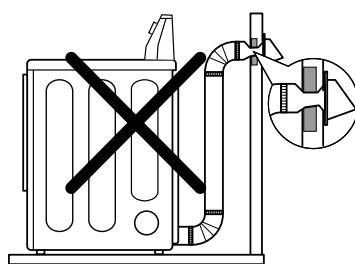
1. FLOW SENSE indicator light is on even when vents have been clean and even when the vents are off.
→ **This is Normal.** After flow sensor recheck full next cycle, flow sensor is reset.
(Flow sensor bars will disappear after dryer has operated two cycle)

■ Bars Are Displayed but Don't Disappear

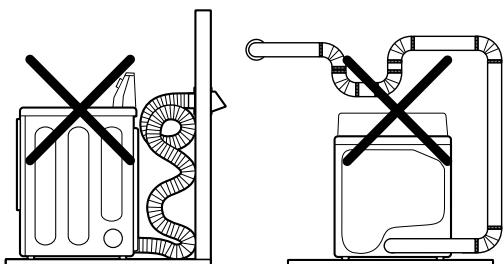
*Control Panel



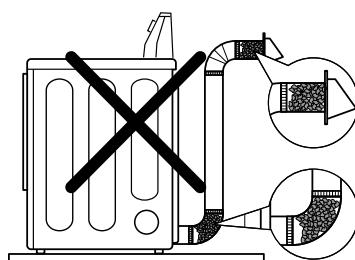
Make sure that the ductwork is not crushed or restricted.



Avoid long runs of ducts or runs with multiple elbows or bends.



Check for blockages and lint build up.



1. This TEST should be used for Factory test /Service test. Do not use this DIAGNOSTIC TEST other than specified.
2. Activating the Heater manually with the Door open may trip the Thermostat attached to the Heater, therefore do not activate it manually. (Do not press the door switch to operate the heater while the door is open)

■ ACTIVATING THE DIAGNOSTIC TEST MODE

1. UNIT must be in standby (unit plugged in, display off)
2. Press POWER while pressing MORE TIME and LESS TIME simultaneously.
3. Press START/PAUSE button to advance through diagnostics.

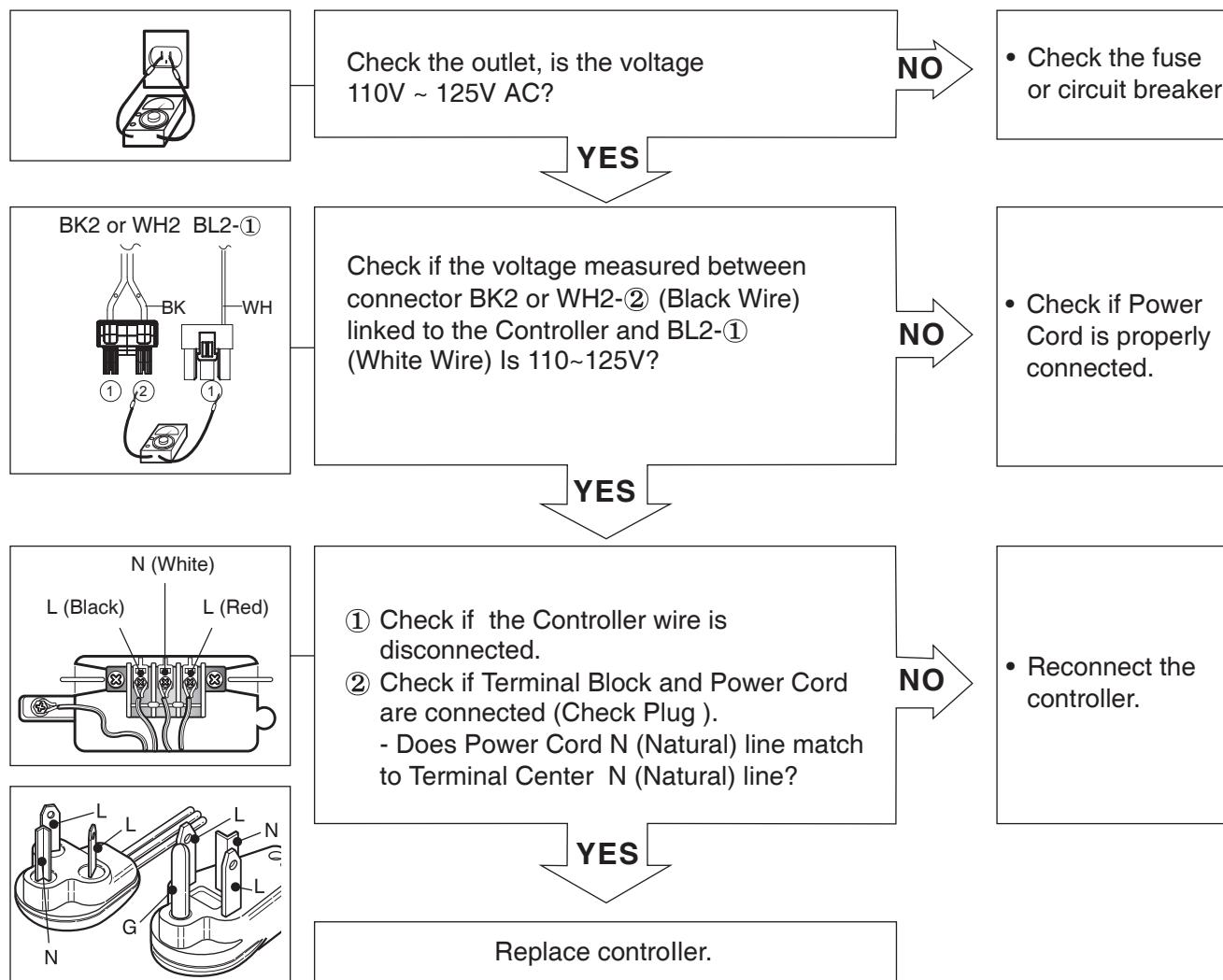
Pressing the START/PAUSE	CHECKING ACTION	DISPLAY	CHECKPOINT
None	Electric control & Temperature sensor	8E9 (Elec Type) 898 (Gas Type)	Standard
		V00	PGM Ver (8E8-V008E8)
		tE1	Thermistor open
		tE2	Thermistor shorted
		tE4	AG Thermistor open or shorted
Once	Motor+Controller	30 = Low moisture 239 = High moisture	Motor runs
			Displays Moisture Sensor Operation If moisture sensor is contacted with damp cloth. The display number is below 180 in normal condition
Twice	■ ELECTRIC TYPE Motor+Heater1(2700W) ■ GAS TYPE Motor	Current Temp. (5~70)	■ ELECTRIC TYPE Heater 1 is energized - 2700 W ■ GAS TYPE Valve not energized (Temperature in the drum is displayed in degrees C.)
3 times	■ ELECTRIC TYPE Motor+Heater1+Heater2 (5400W) ■ GAS TYPE Motor+Gasvalve	Current Temp. (5~70)	■ ELECTRIC TYPE: Heater 1 and heater 2 are energized - 5400 W ■ GAS TYPE: Gas valve is energized (Temperature in the drum is displayed in degrees C.)
4 times	Motor+Pump+Heater2 (runs for 1sec) (Heater1 off)	Pump AD valve (11~255)	Pump runs
		E5	Pump Error
5 times	Motor, Pump, Heater2 off	OO	
6 times	Loads, Controller off		Power off

* To check pump operation:

At the fourth press of the test mode, if the AD value of the pump is higher than 10 on the display, the pump is normal. If it is lower than 10, E5 error will be displayed.

■ Test 1 120V AC Electrical Supply

Caution	When measuring power, be sure to wear insulated gloves, to and avoid an electric shock
Trouble Symptom	No power was applied to controller. (LED, LCD Display off)
Measurement Condition	With dryer power on; connector linked to controller.



Caution	When measuring power, be sure to wear insulated gloves, to and avoid an electric shock.
Trouble Symptom	Check the Tab Relays Connection properly.
Measurement Condition	With dryer power on; connector linked to controller.

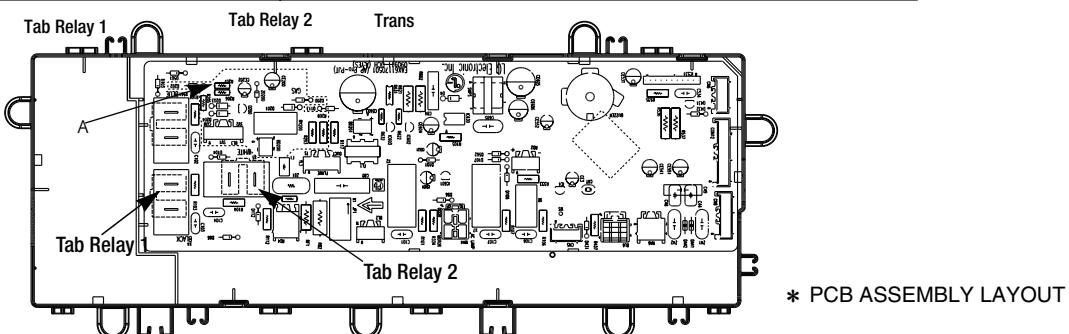
1. Power Connection

: Connection of the Tab Relay with Heater (Electric)

	Tab Relay 1	Tab Relay 2	Heater 1	Heater 2	Remark
High Mid High Medium	on	on	on	on	Temperature Control below $68 \pm 4^{\circ}\text{C}$ Turn on Heater1 and Heater2.
Low Extra Low	on	off	on	off	Temperature Control below $52 \pm 4^{\circ}\text{C}$ Only Turn on Heater1.

: Connection of the Tab Relay with Burner (Gas)

	Tab Relay 1	Burner	Remark
High Mid High Medium	O	O	Temperature Control below $70 \pm 4^{\circ}\text{C}$ Turn on Burner
Low Extra Low	O	O	Temperature Control below $47 \pm 4^{\circ}\text{C}$ Turn on Burner



2. Status Mode Of The Connection

: Connection of Tab Relay with the PCB ASSEMBLY (Electric)

	Color	Connection		Remark
		Harness	PCB	
Connector Housing	Black		Tap relay 1	Check the Matching color Between Harness wire and Tab Relay. (Black Housing – Black Tab Relay)
	White		Tap relay 2	Check the Matching color Between Harness wire and Tab Relay. (White Housing – White Tab Relay)

3. Incorrect Connection Error and Results.

: Incorrect Connection of the Tab Relay and Connector Housing (Elec)

Items	Case	Heater1 Operation(black)	Heater2 Operation(White)	PCB condition Of operation
1.Black and White Housing	Wire ①, ② CROSS	Off	Off	Power Off
2.Black Housing	Wire ①, ② CROSS	Off	Off	Power Off
3.White Housing	Wire ①, ② CROSS	Normal	Normal	Power On
* 4.Black and White Housing	Housing CROSS	Heater2	Heater1	Power On
5.Black and White Housing	Housing and Wire ①, ② CROSS	Off	Off	Power Off

: Incorrect Connection of the Tab Relay and Connector Housing (Gas)

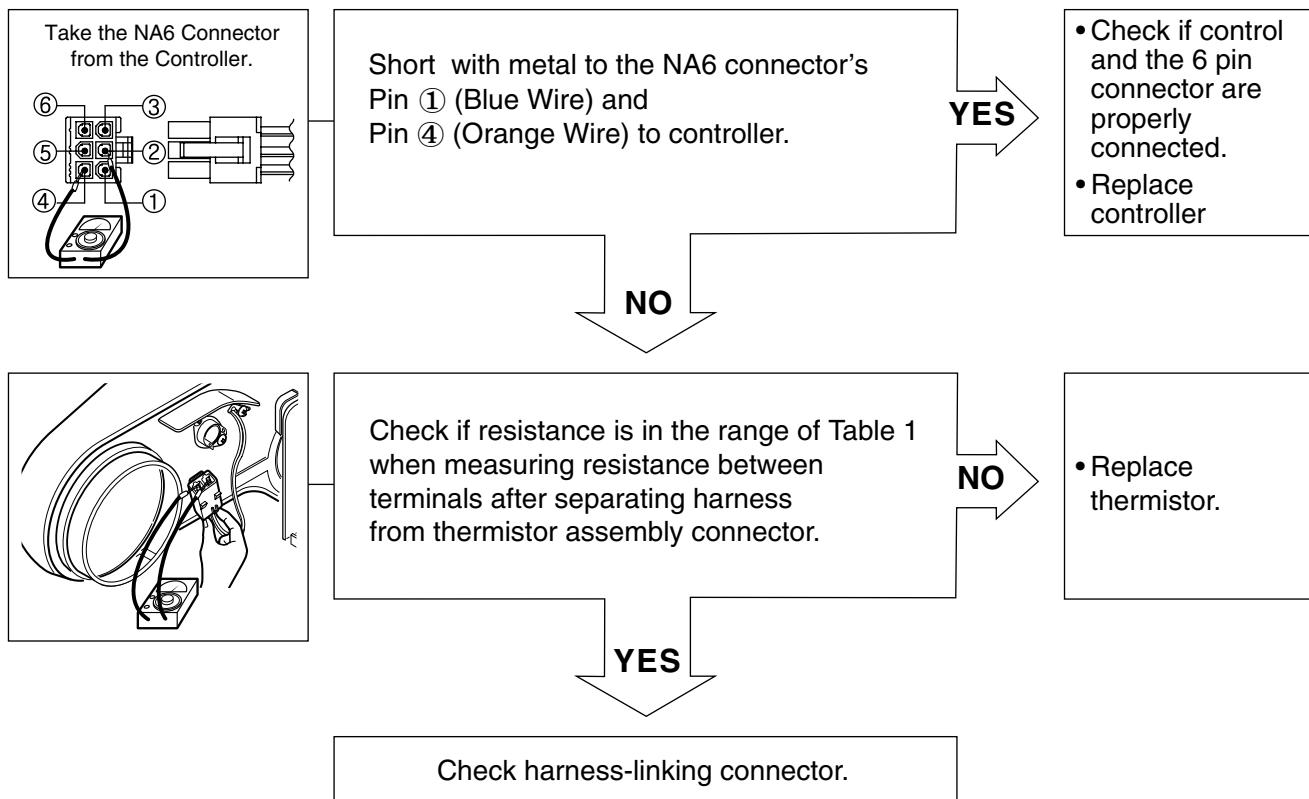
Items	Case	Heater1 Operation(black)	Heater2 Operation(White)	PCB condition Of operation
1.Black and White Housing	Wire ①, ② CROSS	Off	Off	Power Off

⚠ CAUTION

- Caution! Improper connection of the heater can damage the heater or the main board.

■ Test 2 Thermistor Test --- Measure with Power Off

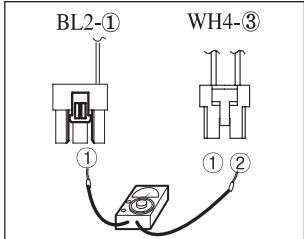
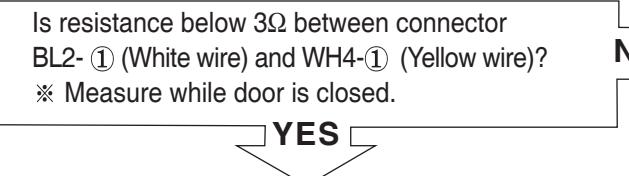
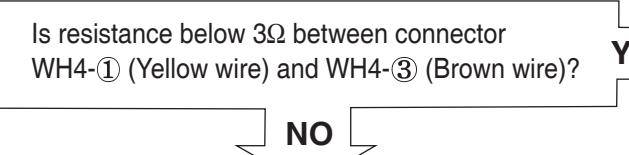
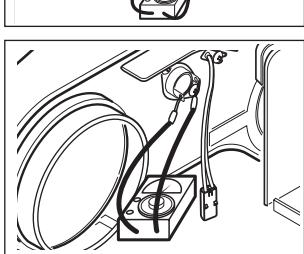
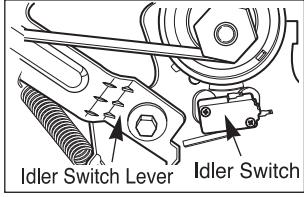
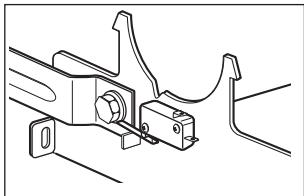
Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with the ground.)
Trouble Symptom	<ul style="list-style-type: none"> ① During Diagnostic Test, tE1 and tE2 error occur. ② During operation, heater would not turn off, or remains on. ③ Difference between actual and sensed temperature is significant.
Measurement Condition	After turning power off, measure the resistance.



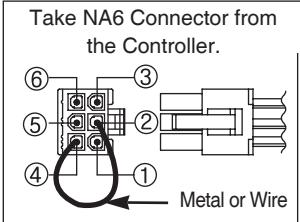
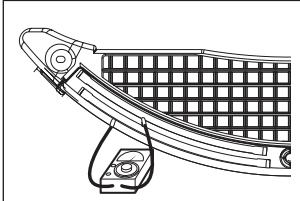
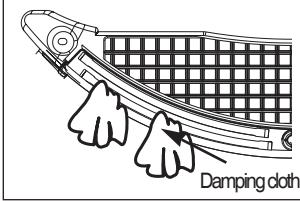
■ Table 1. Resistance for Thermistor Temperature.

Air TEMP. [°F(°C)]	RES. [KΩ]	Air TEMP. [°F(°C)]	RES. [KΩ]	Air TEMP. [°F(°C)]	RES. [KΩ]
50°F (10°C)	18.0	90°F (32°C)	7.7	130°F (54°C)	2.9
60°F (16°C)	14.2	100°F (38°C)	6.2	140°F (60°C)	3.0
80°F (21°C)	11.7	110°F (43°C)	5.2	150°F (66°C)	2.5
70°F (27°C)	9.3	120°F (49°C)	4.3	160°F (71°C)	2.2

■ Test 3 Motor Test

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with earth line.)
Trouble Symptom	Drum will not rotate; no fan will function; no heater will work.
Measurement Condition	Turn the dryer's power off, then measure resistance.
	 <p>Is resistance below 3Ω between connector BL2-① (White wire) and WH4-③ (Brown wire)? ※ Measure while door is closed.</p> <p>YES → <ul style="list-style-type: none">Replace control. (Relay check)Check controller connector.</p> <p>NO →  <p>Is resistance below 3Ω between connector BL2-① (White wire) and WH4-① (Yellow wire)? ※ Measure while door is closed.</p> <p>YES →  <p>Is resistance below 3Ω between connector WH4-① (Yellow wire) and WH4-③ (Brown wire)?</p> <p>YES → <ul style="list-style-type: none">Replace control. (Relay check)Check controller connector.</p> <p>NO →  <p>Is resistance below 1Ω between terminals of outlet thermostat attached to blower housing?</p> <p>YES → <ul style="list-style-type: none">Replace outletThermostat. (Refer to 'component')</p> <p>NO →  <p>Does idle switch attached to motor bracket operate level by drum belt? (Not operating Lever is normal.)</p> <p>YES → <ul style="list-style-type: none">Check Idler assembly.Drum belt cuts offDrum belt takes off from Motor pulley.</p> <p>NO →  <p>Is resistance below 1Ω between Idler switch terminals?</p> <p>YES → <ul style="list-style-type: none">Check motor. (Refer to 'motor diagram & check')Check if control connector is contacted.</p> </p></p></p></p></p>

■ Test 4 Moisture Sensor

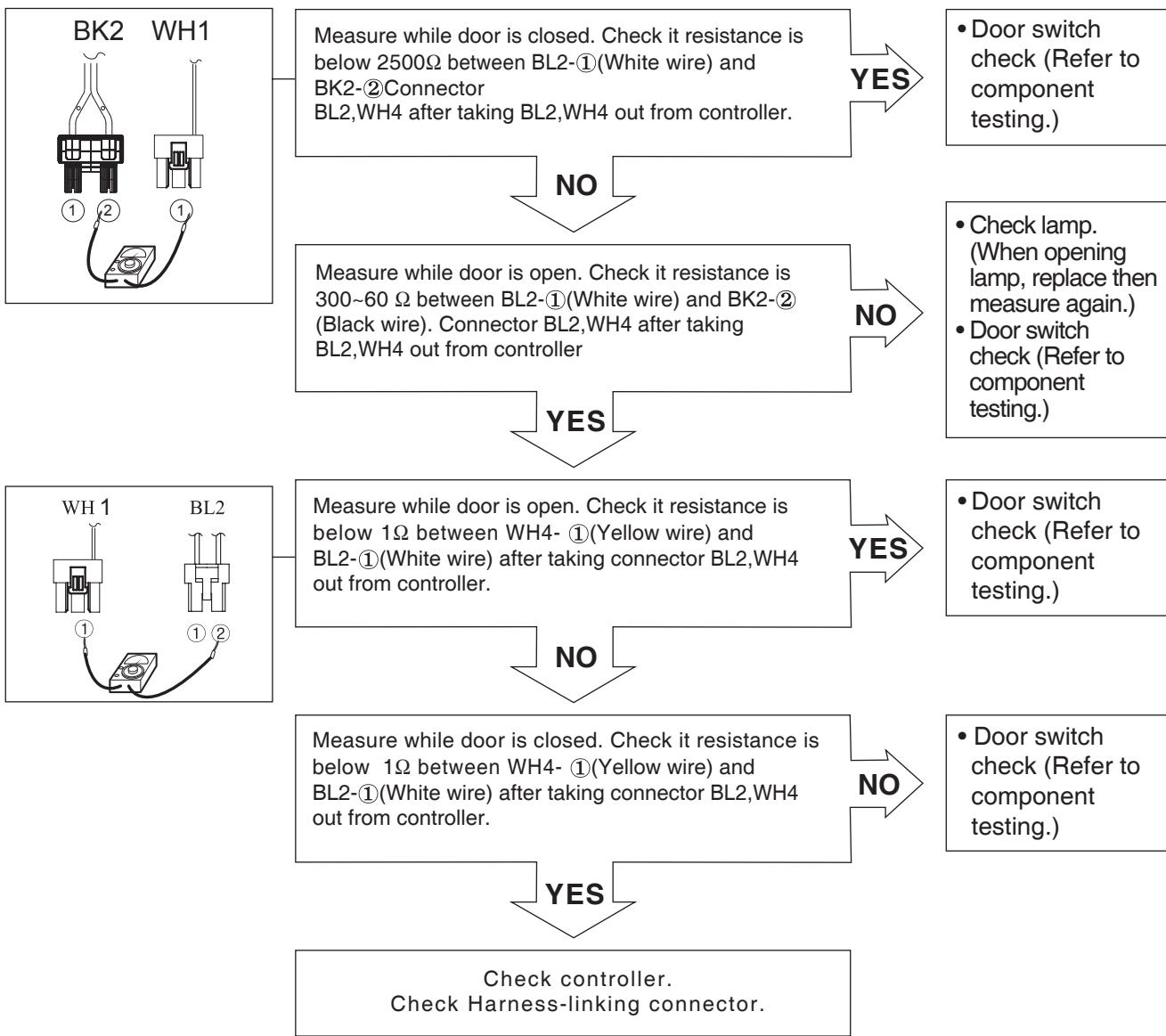
Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with ground line.)
Trouble Symptom	Degree of dryness does not match with dry Level.
Measurement Condition	Turn the dryer's power off, then measure resistance.
	 <p>Short with metal to the 6 pin connector's Pin② (Orange Wire) and Pin④ (Blue Wire) to controller.</p>  <p>When measuring resistance in electric load, is resistance below 1Ω?</p> <p>YES</p> <p>NO</p> <ul style="list-style-type: none"> • Check electro Load and harness connector • Check harness-linking connector.  <p>When contacting cloth to electro load:</p> <ol style="list-style-type: none"> 1. Is the measurement within the range of Table 2 during Diagnostic Test? 2. Is the measurement within the range of Table 2 when measuring the voltage in the NA6 connector's Pin ② (Orange wire) and Pin ④ (Blue wire)? <p>YES</p> <p>NO</p> <ul style="list-style-type: none"> • Replace control and check. <p>Normal Condition</p>

■ Table 2. IMC Ratio and Display Value / Voltage (IMC: Initial Moisture Content)

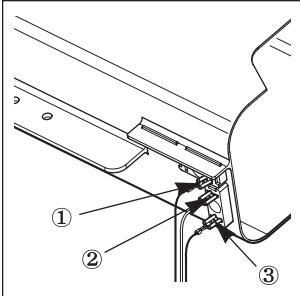
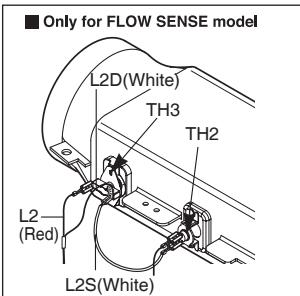
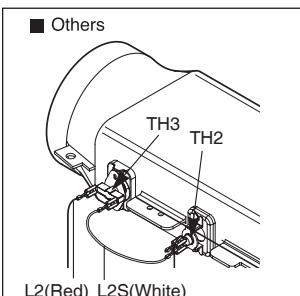
IMC	Display Value	Voltage (DC) (between NA6 terminal ②,④)	Remark
70% ~ 40%	50 ~ 130	2.5V	Weight after removing from washing machine
40% ~ 20%	130 ~ 20	2.0V ~ 4.0V	Damp dry
10% ~ Dried clothes	205 ~ 240	Over 4.0V	Completely-dried clothes

■ Test 5 Door Switch Test

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with earth line.)
Trouble Symptom	Door opening is not sensed. (During operation, when opening door, drum motor and Heater run continuously) door close is not sensed. (Drum motor will not operate. Display will flash at 0.5 second intervals.)
Measurement Condition	After turning Dryer Power Off, measure resistance.



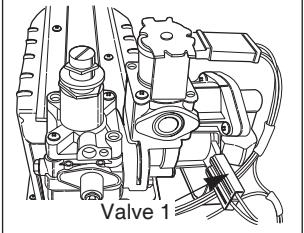
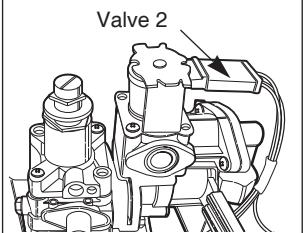
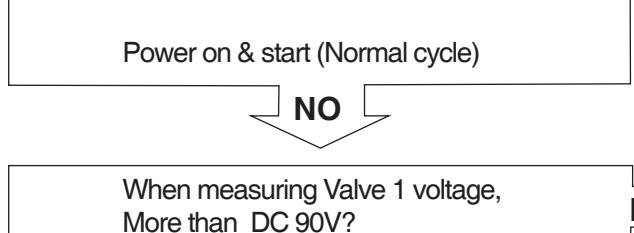
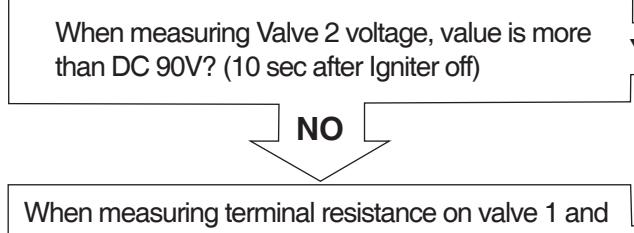
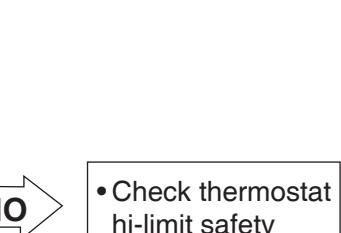
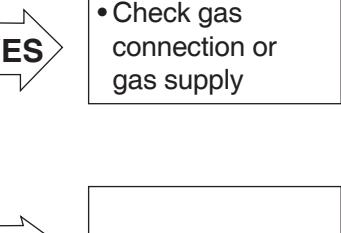
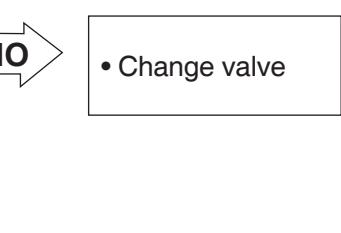
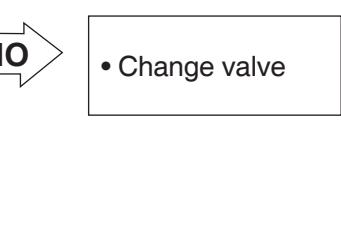
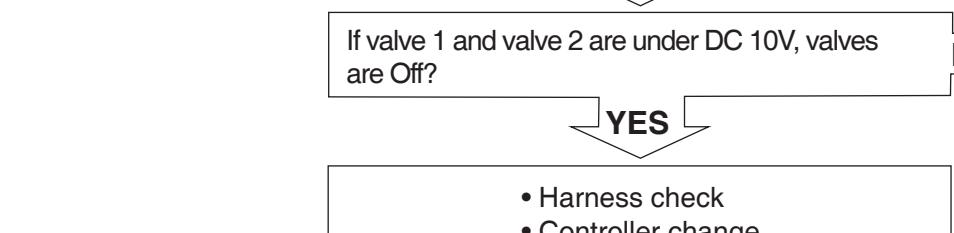
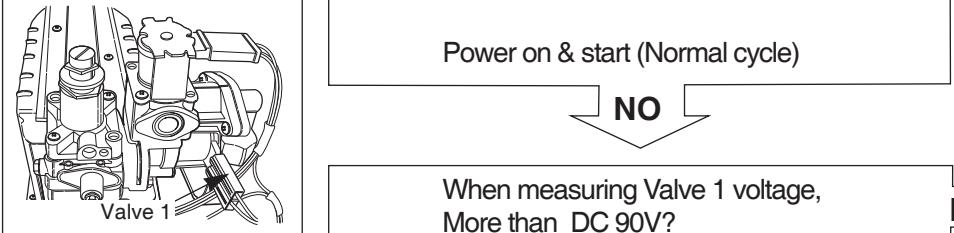
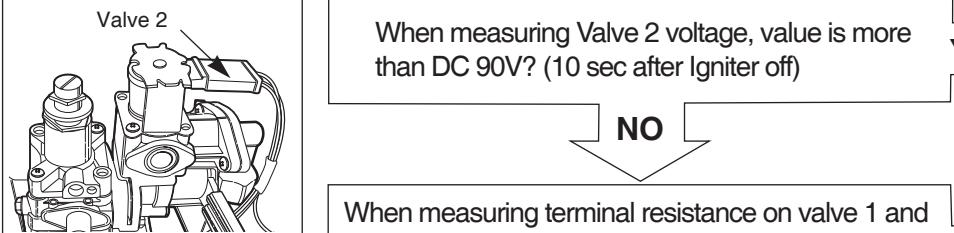
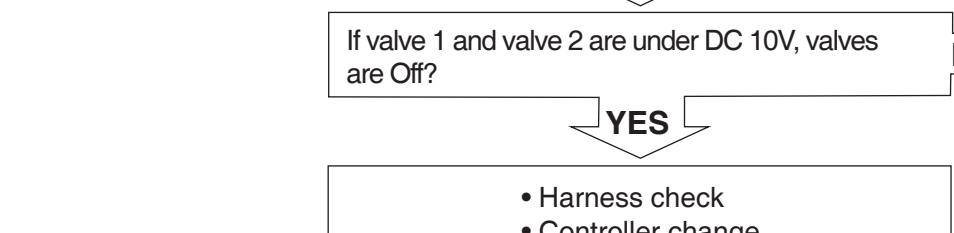
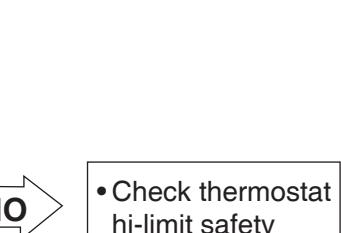
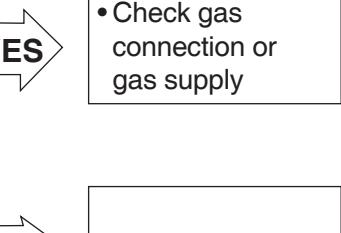
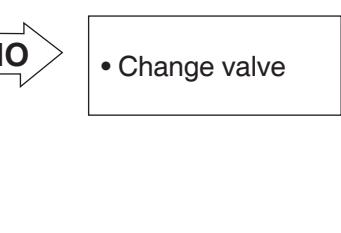
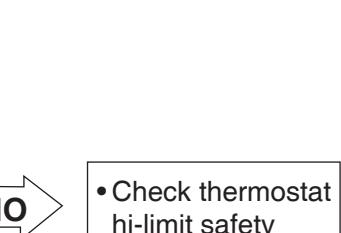
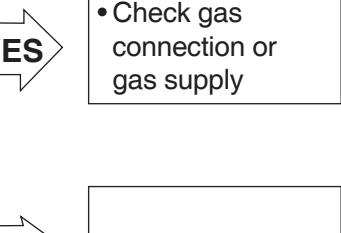
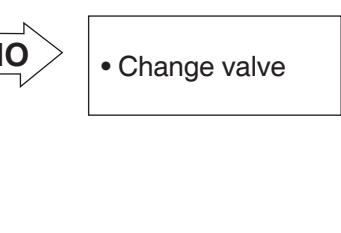
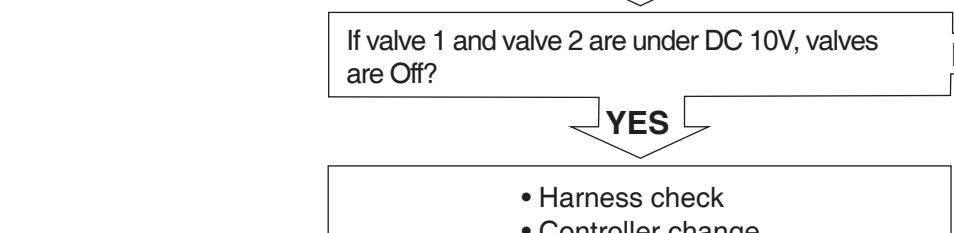
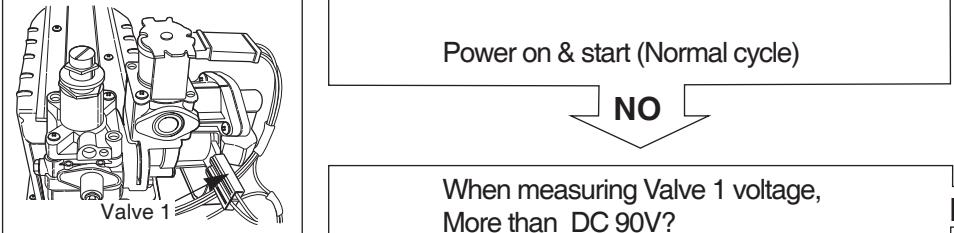
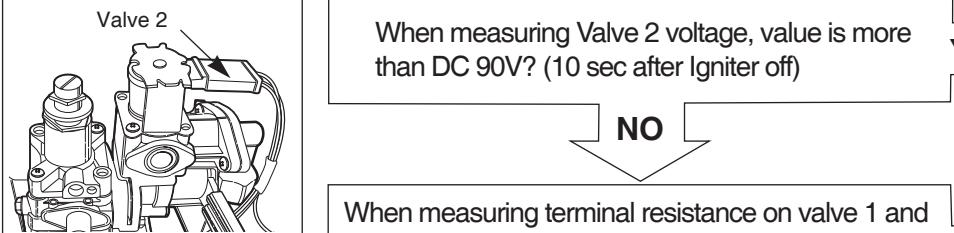
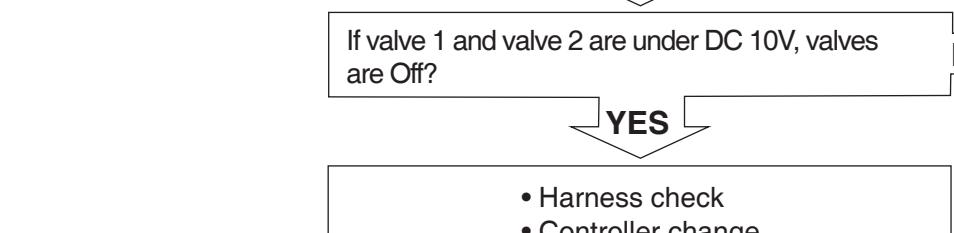
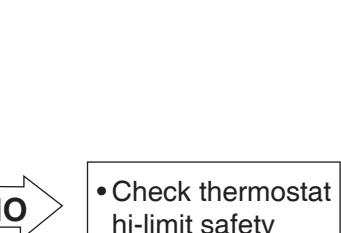
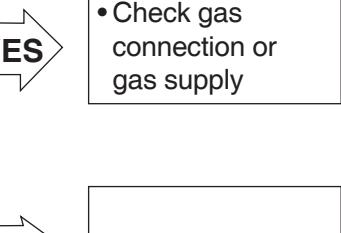
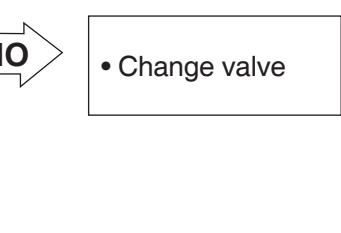
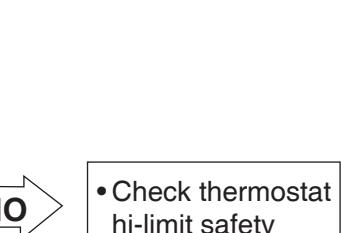
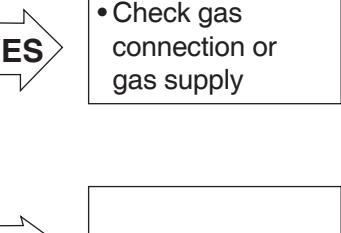
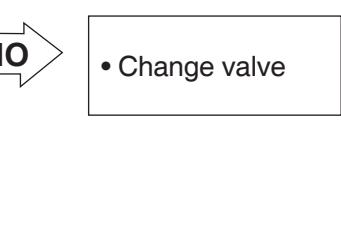
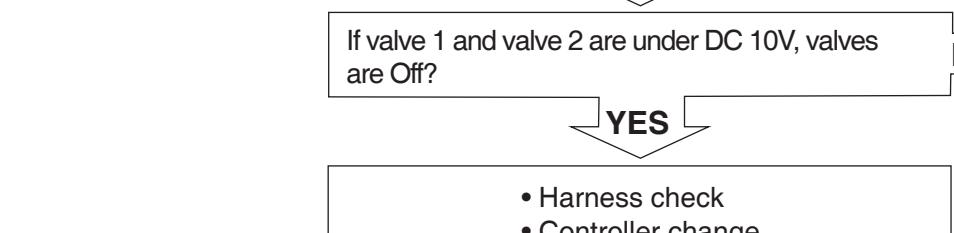
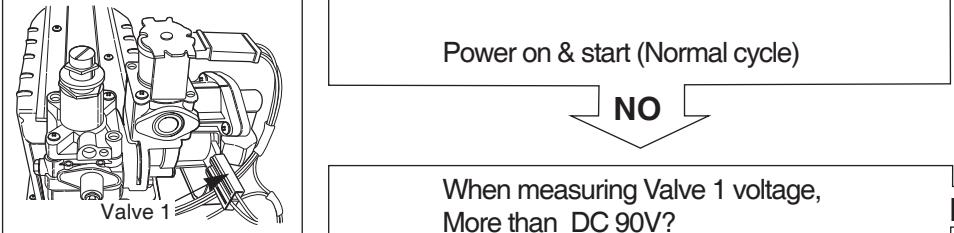
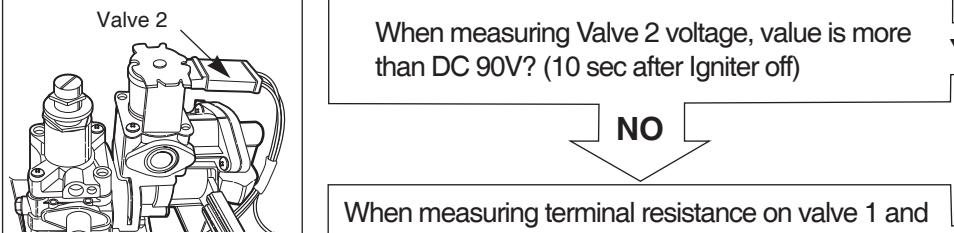
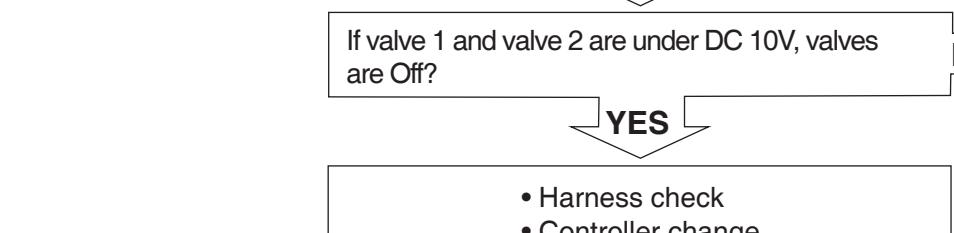
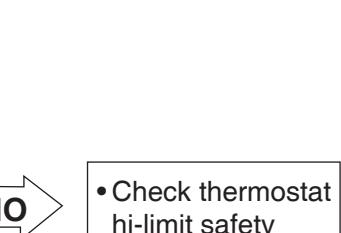
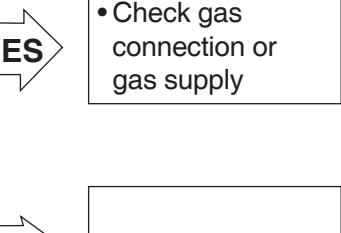
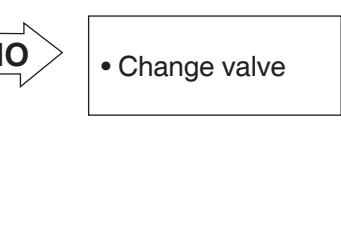
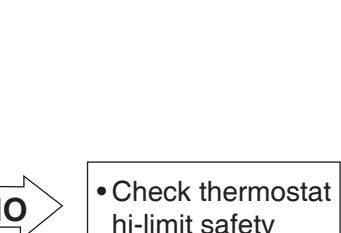
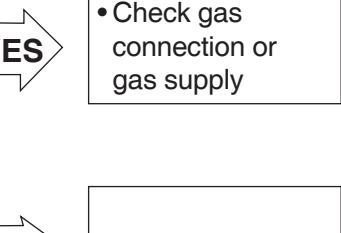
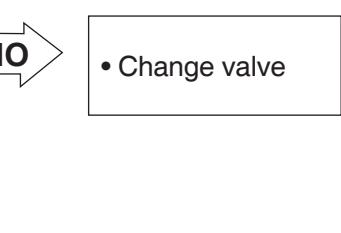
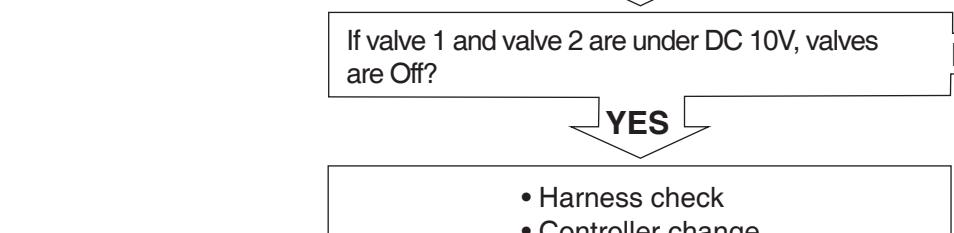
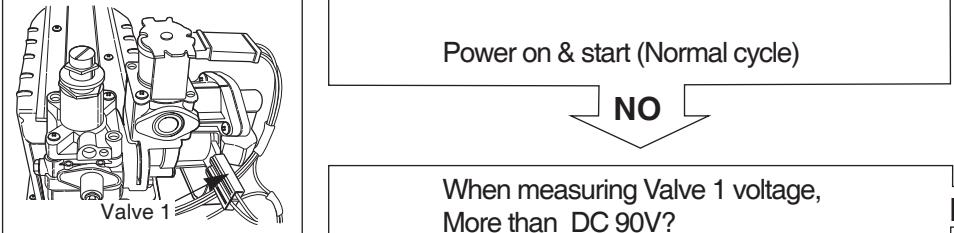
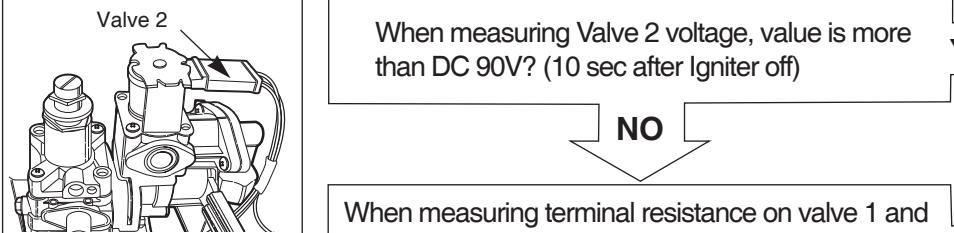
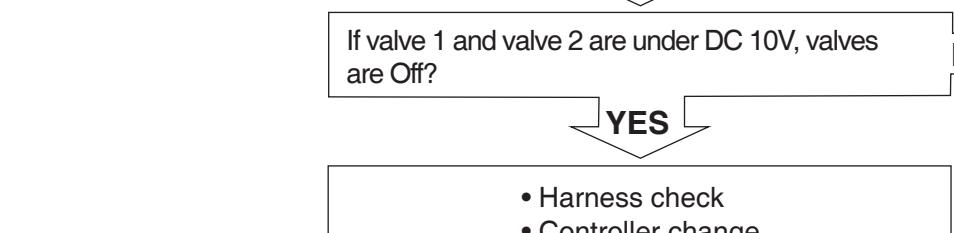
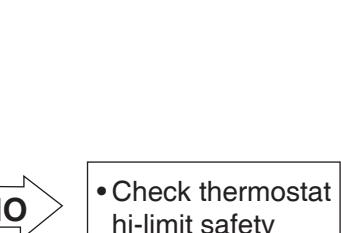
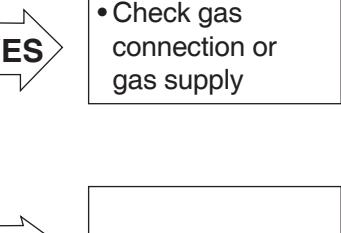
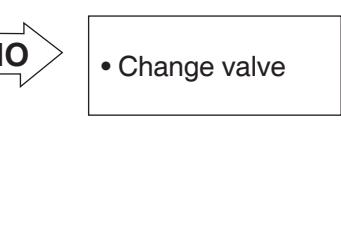
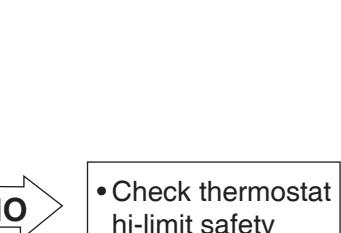
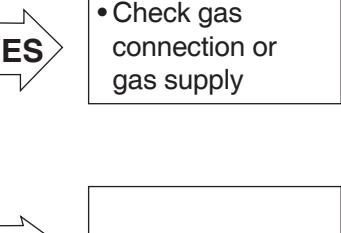
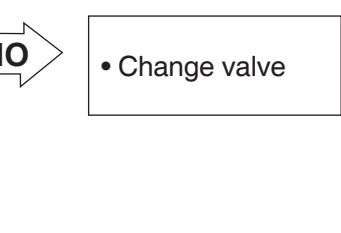
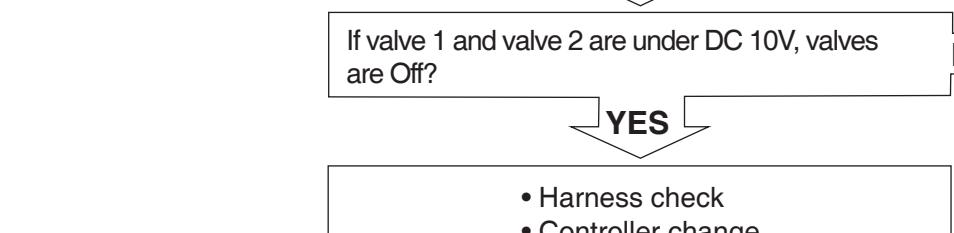
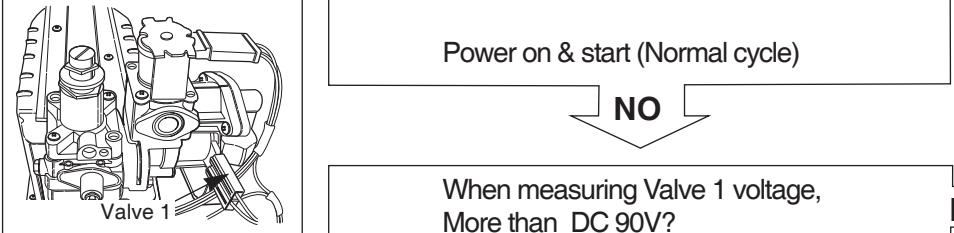
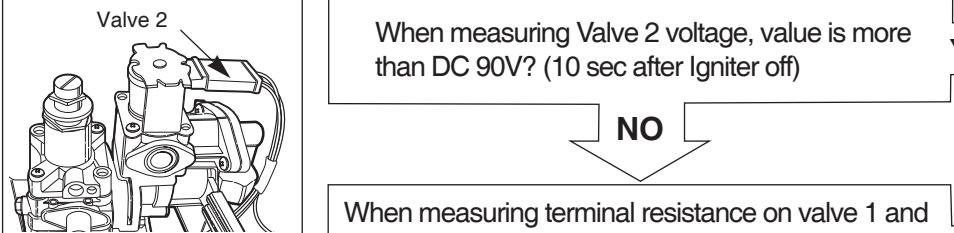
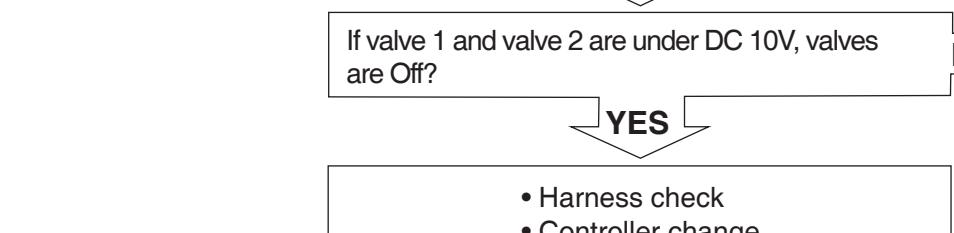
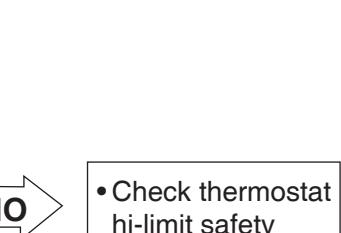
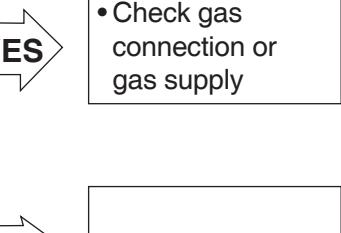
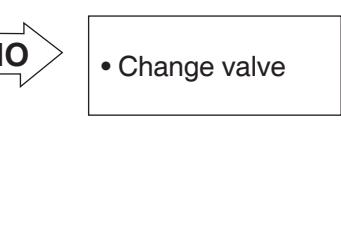
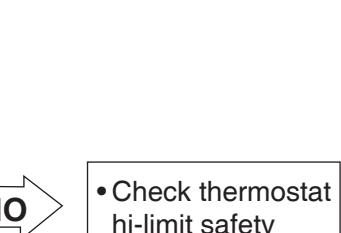
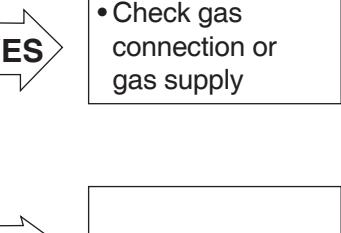
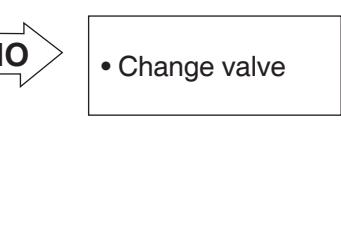
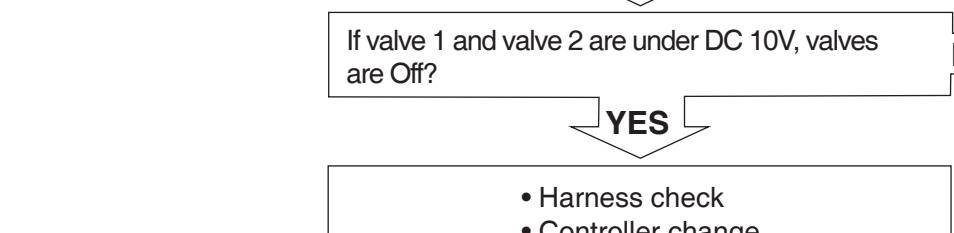
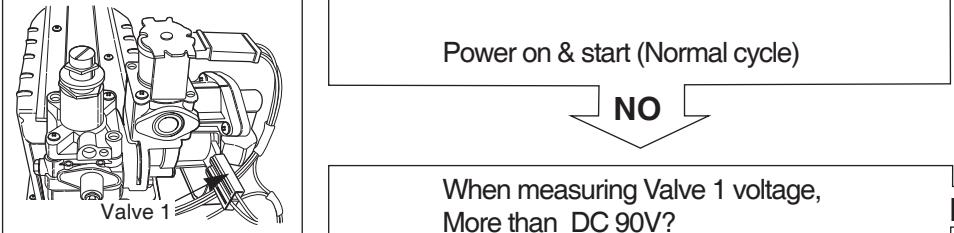
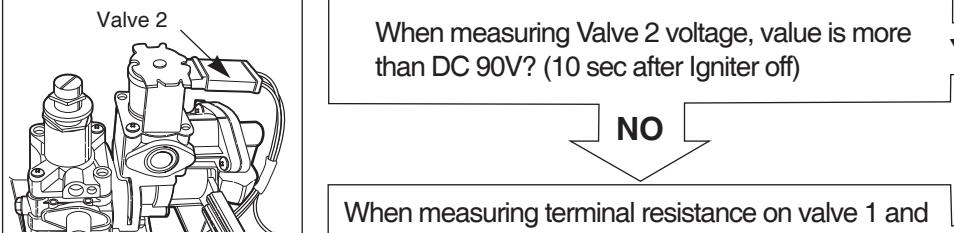
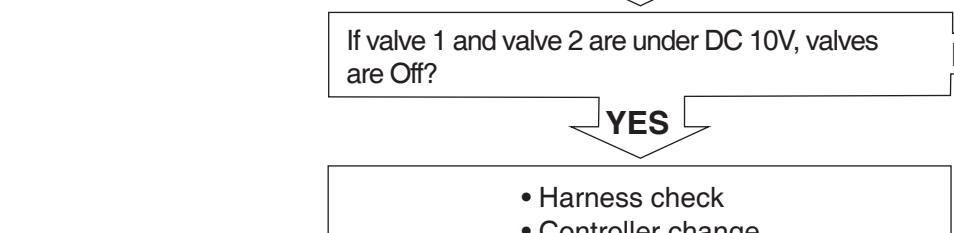
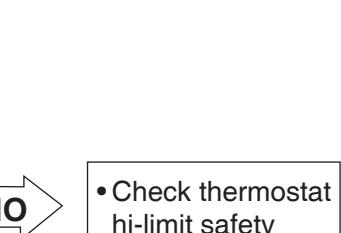
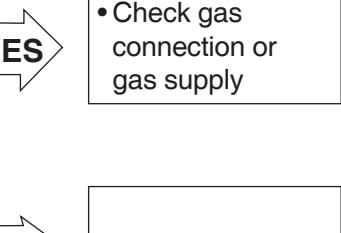
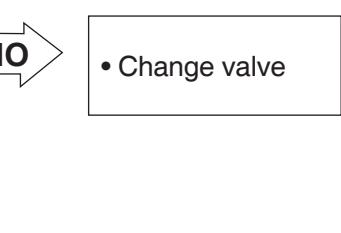
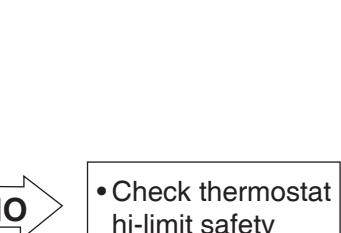
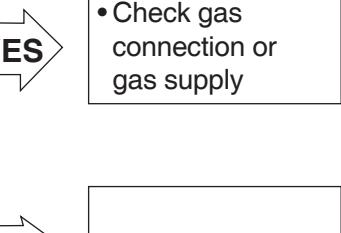
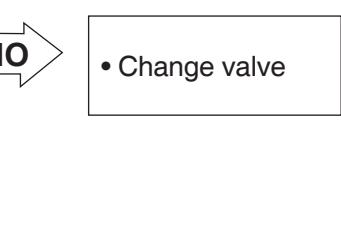
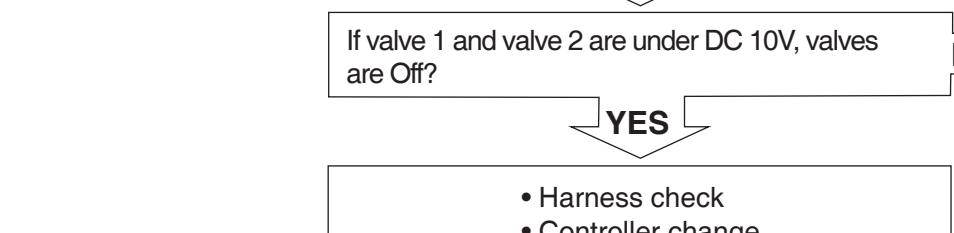
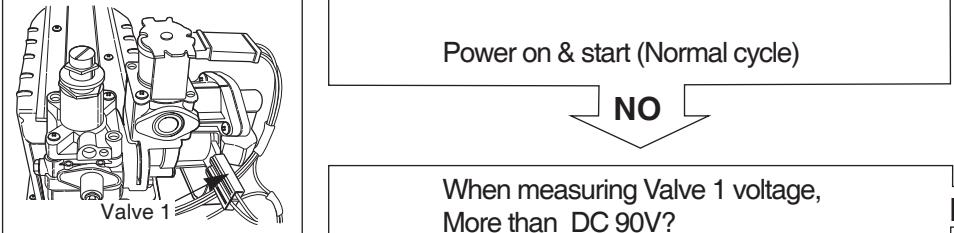
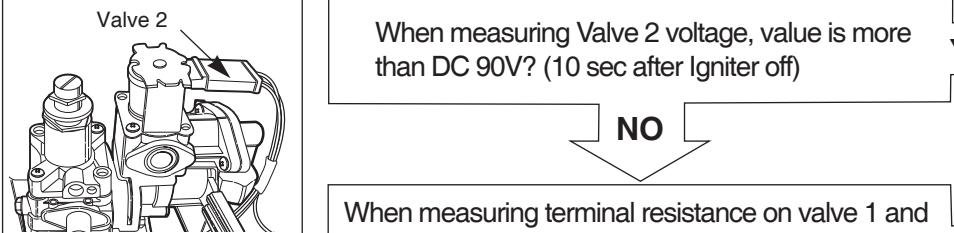
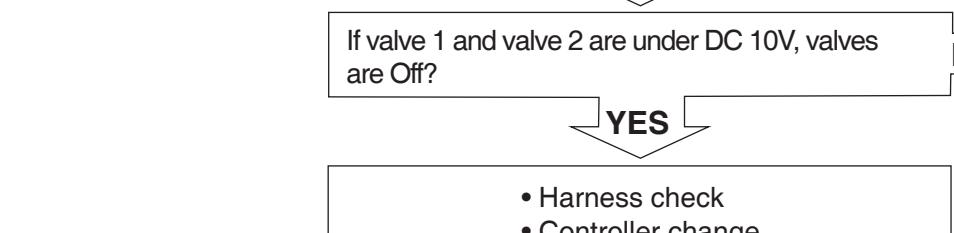
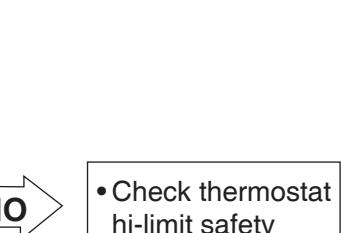
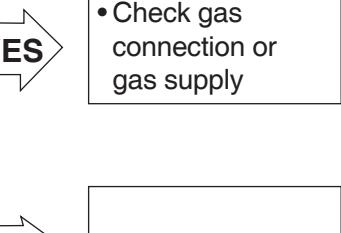
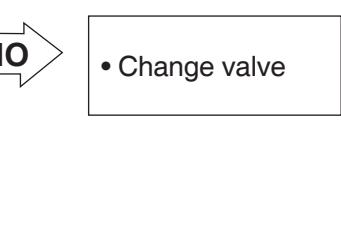
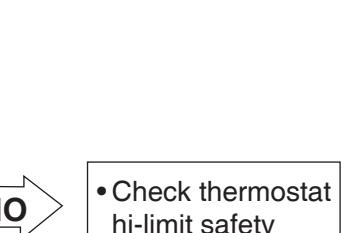
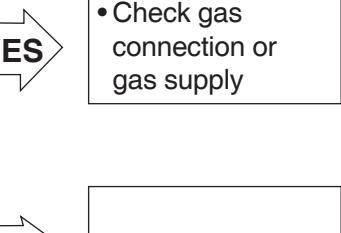
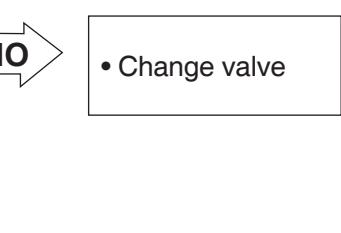
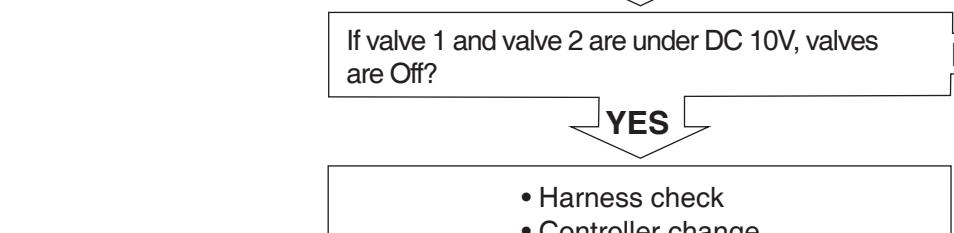
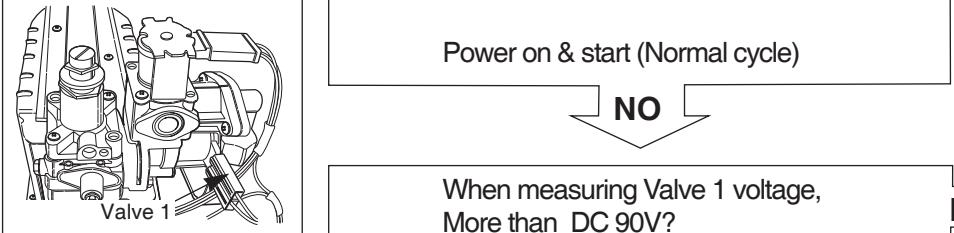
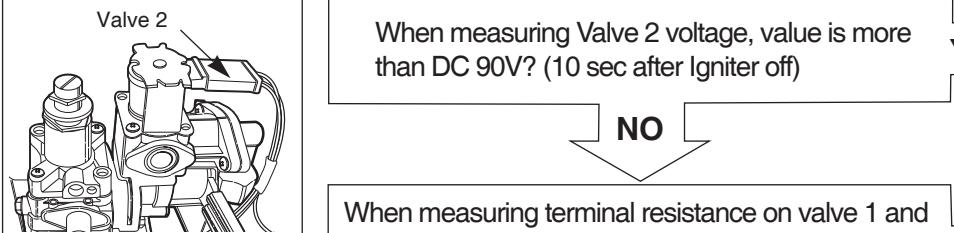
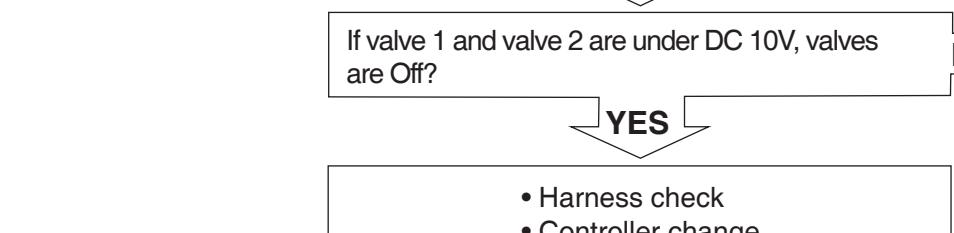
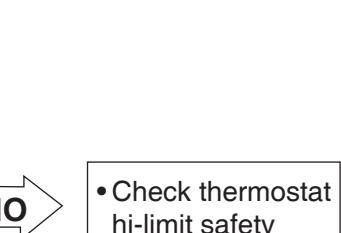
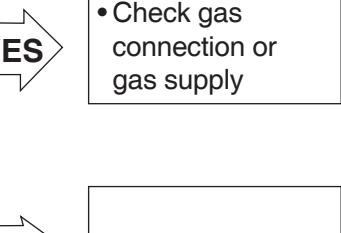
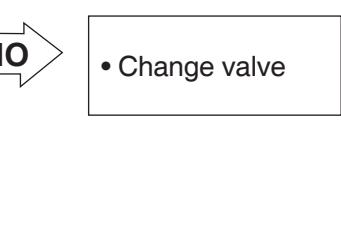
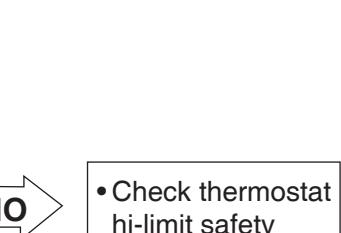
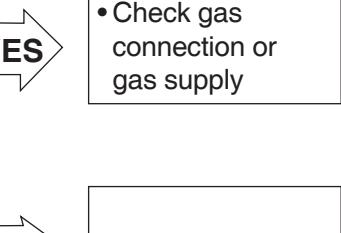
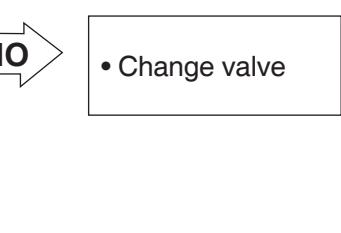
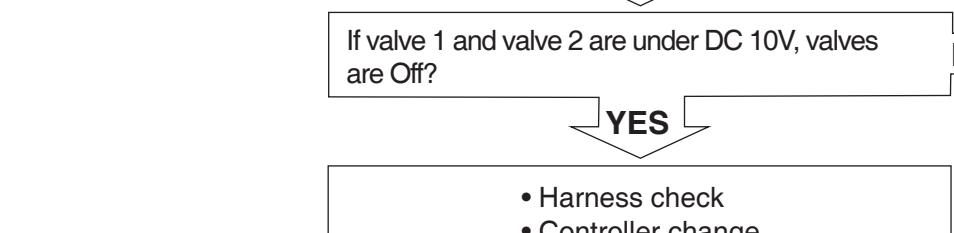
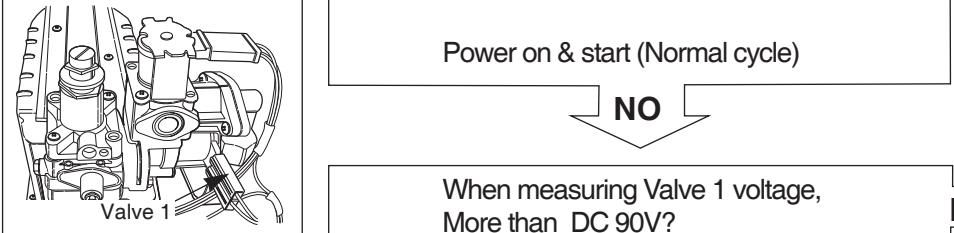
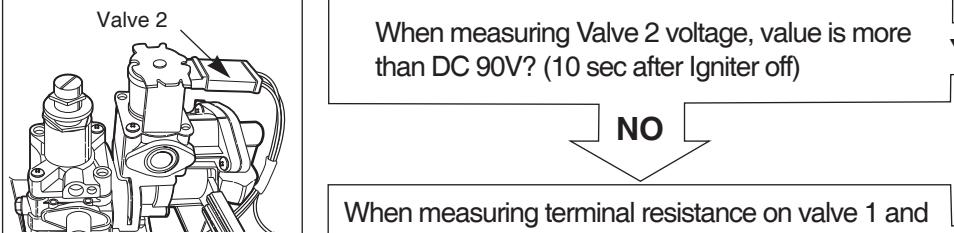
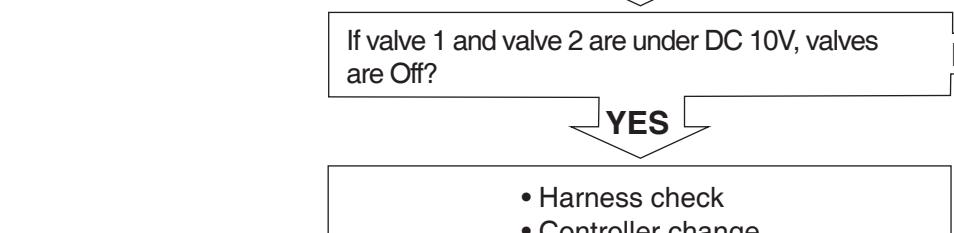
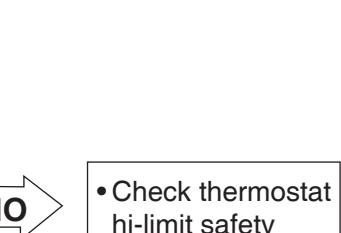
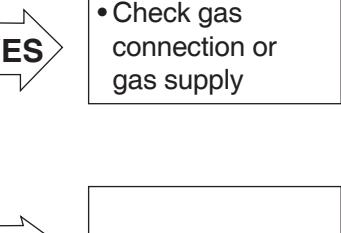
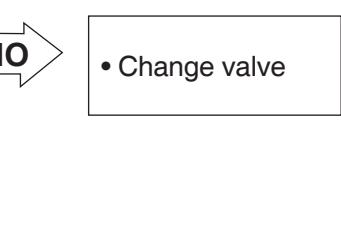
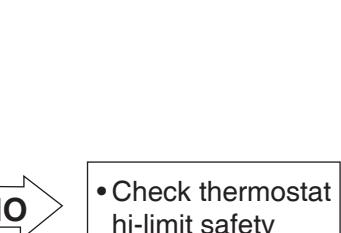
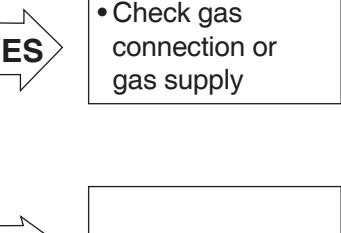
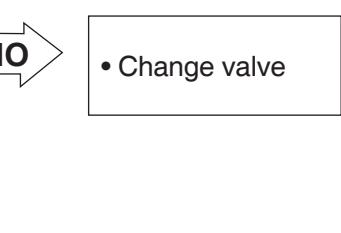
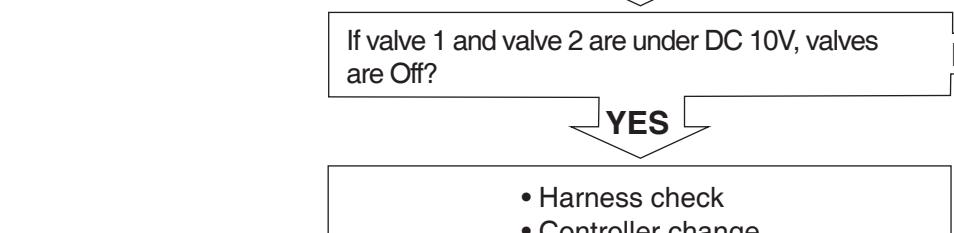
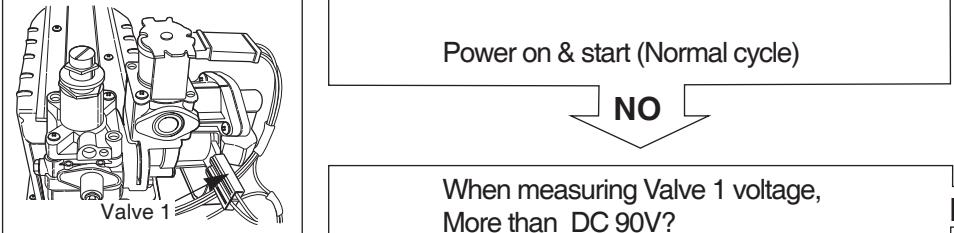
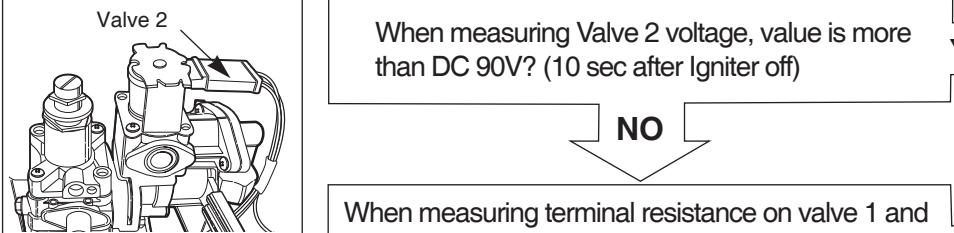
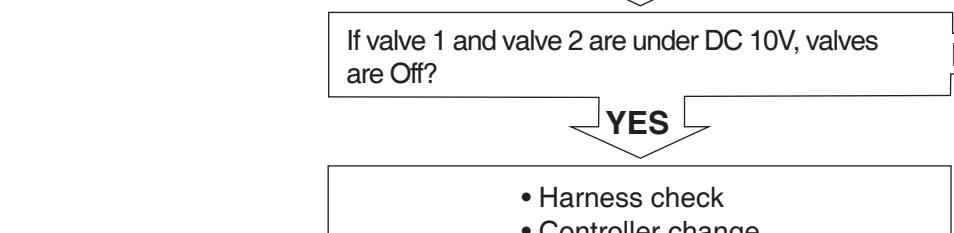
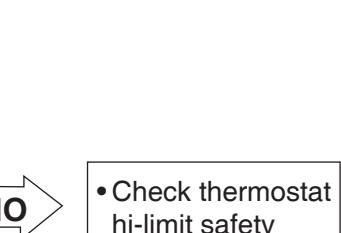
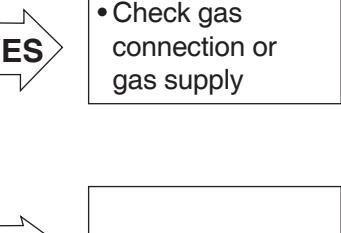
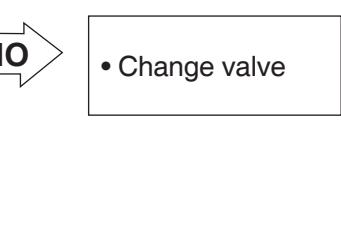
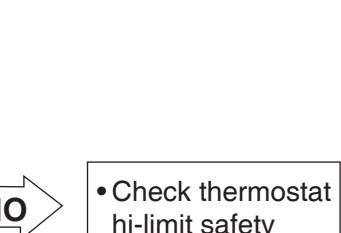
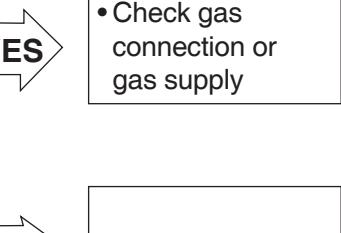
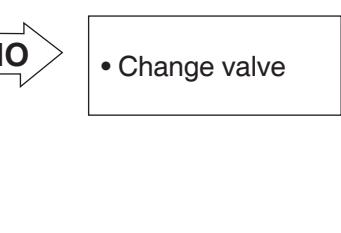
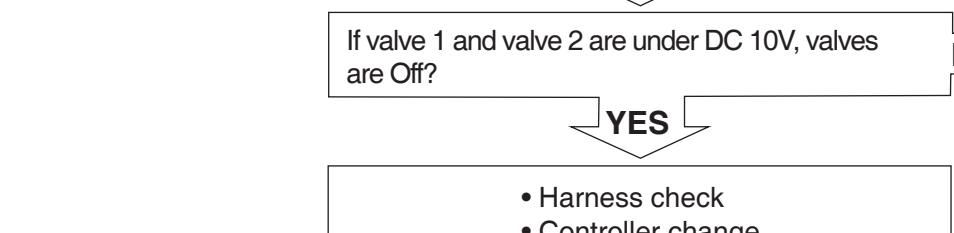
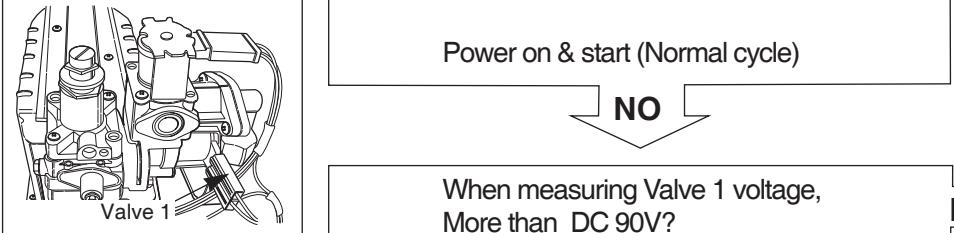
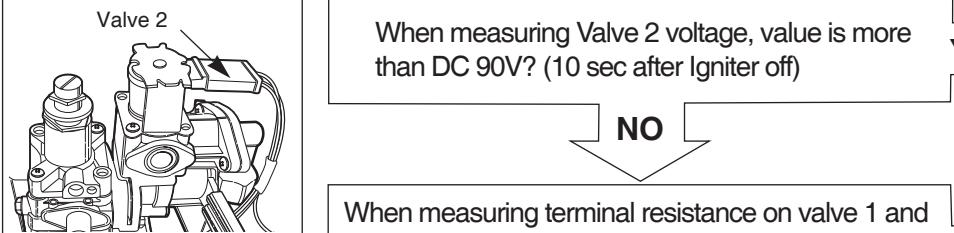
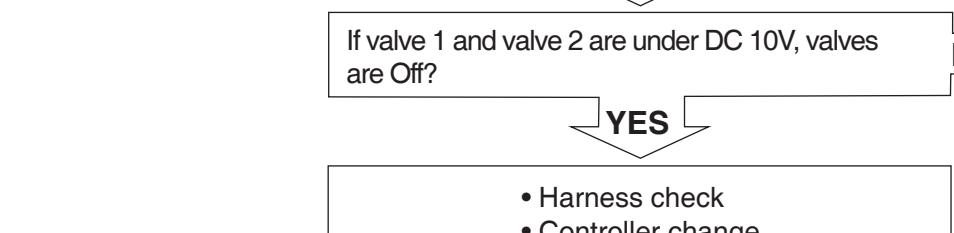
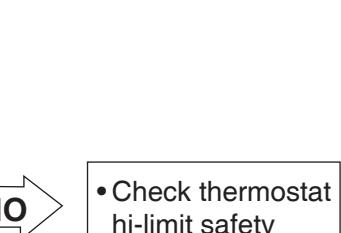
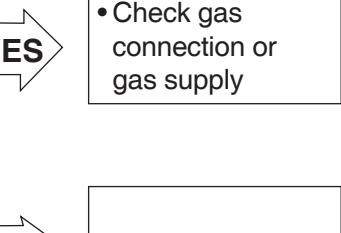
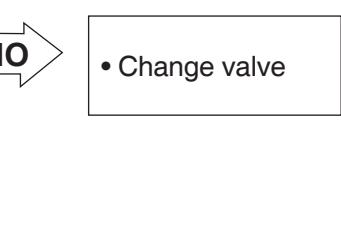
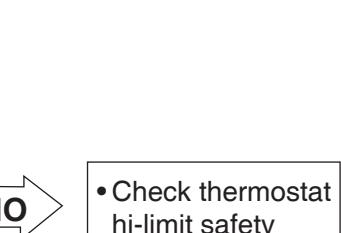
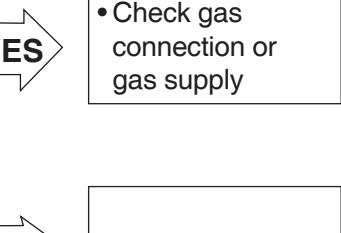
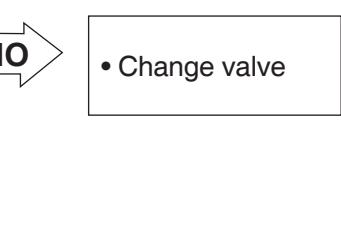
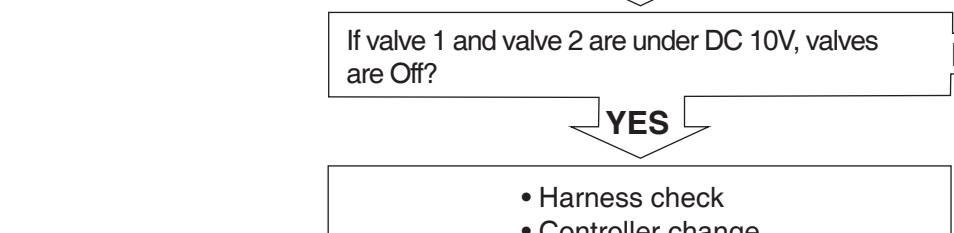
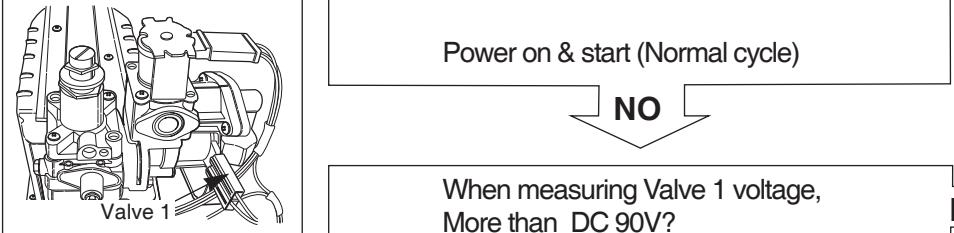
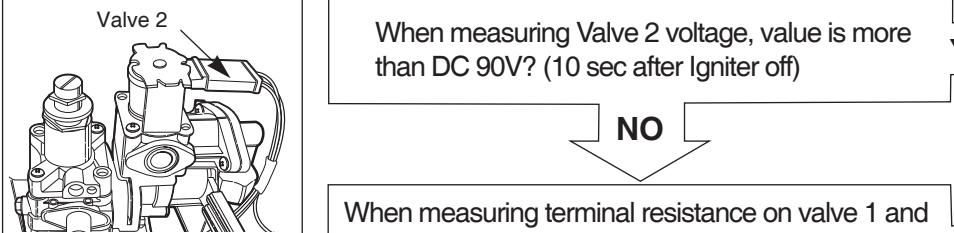
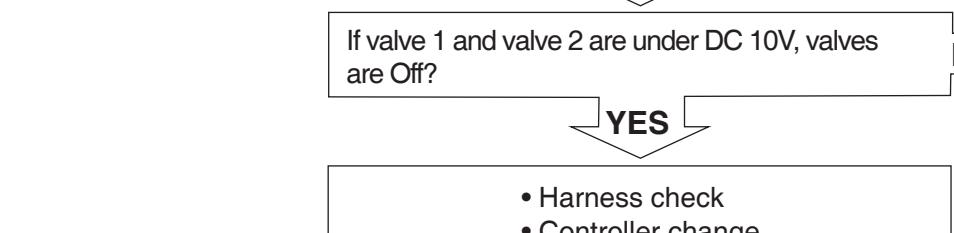
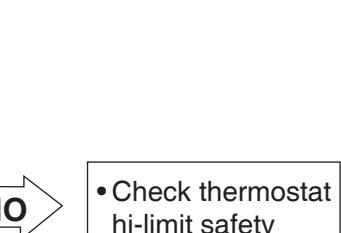
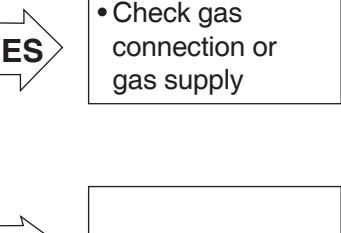
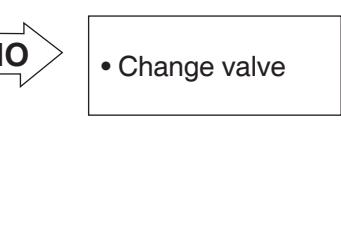
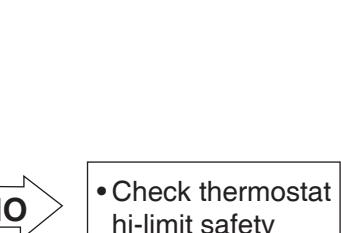
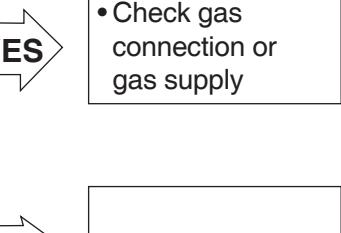
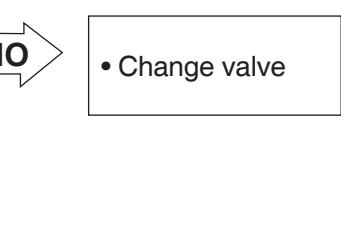
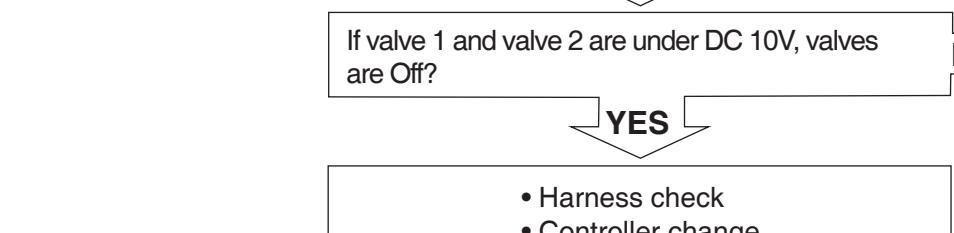
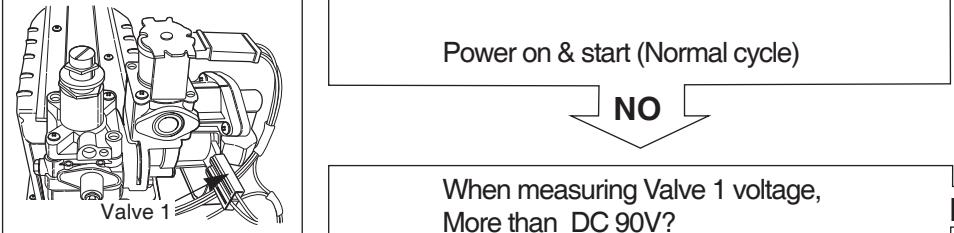
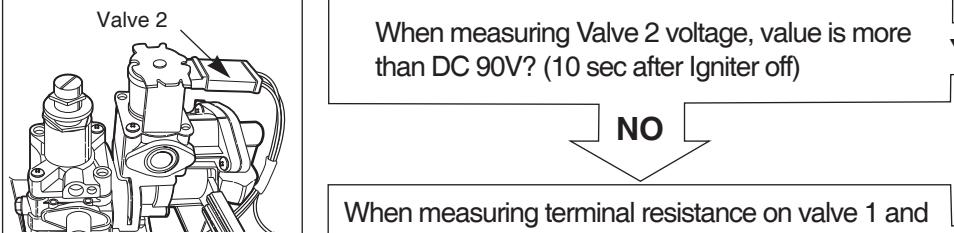
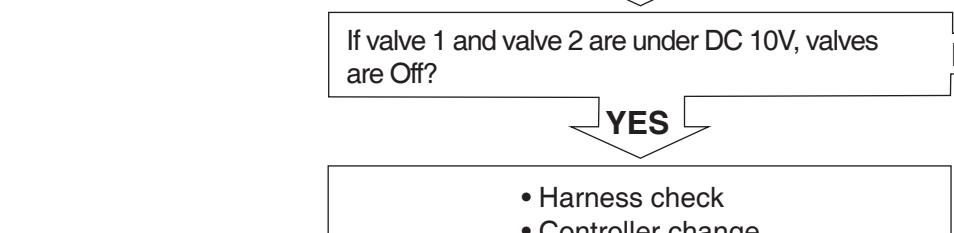
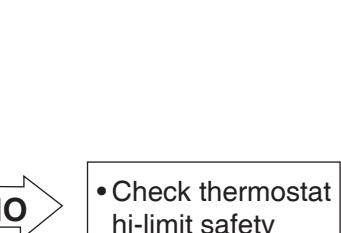
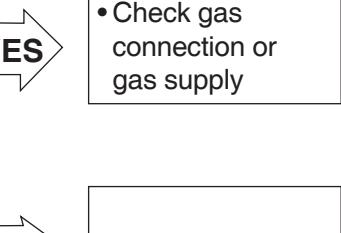
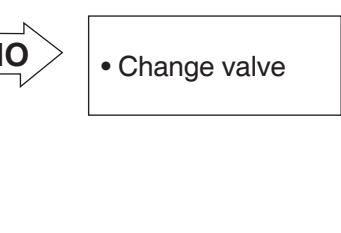
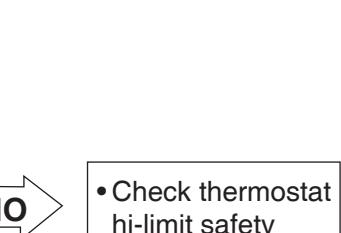
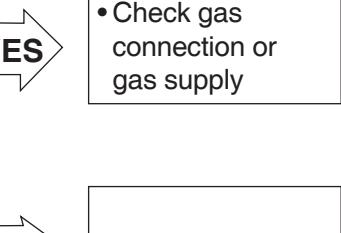
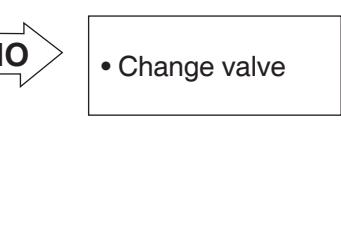
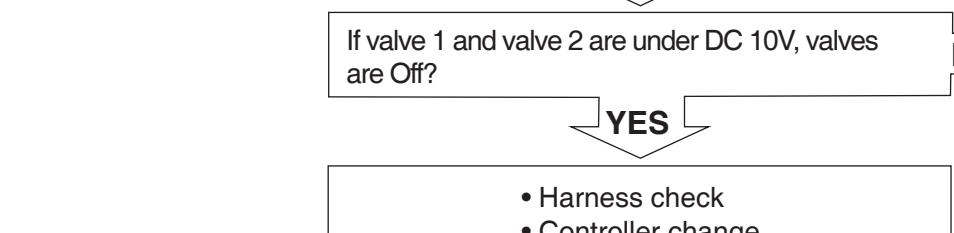
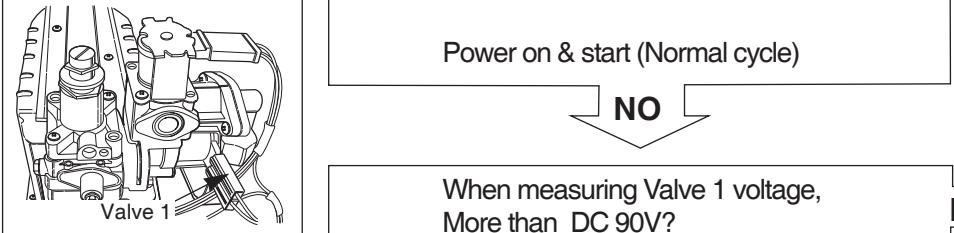
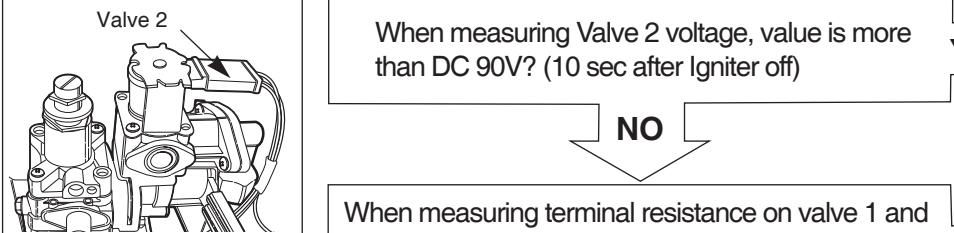
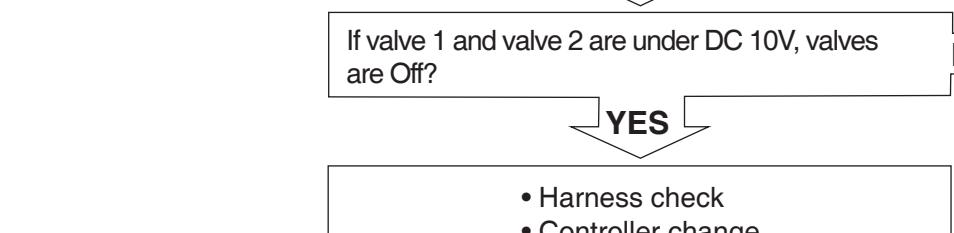
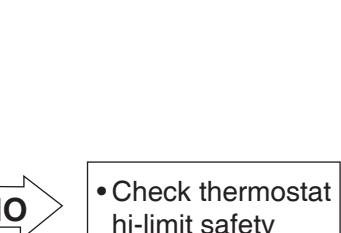
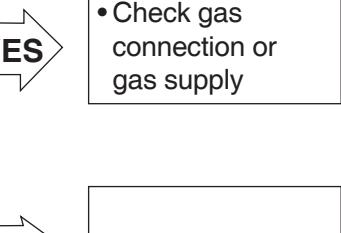
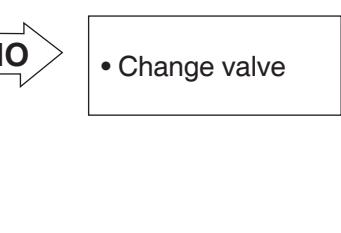
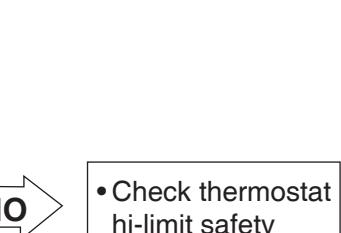
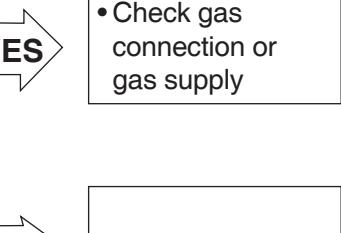
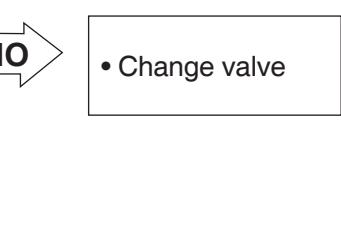
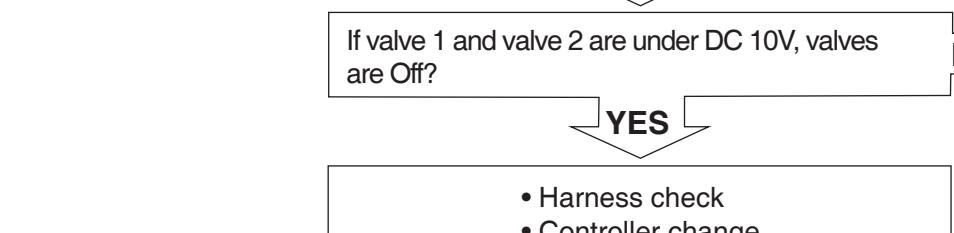
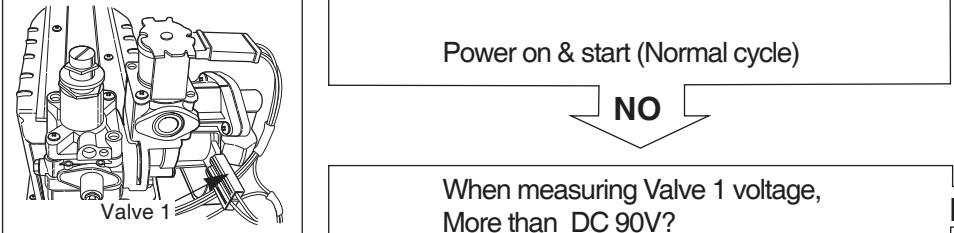
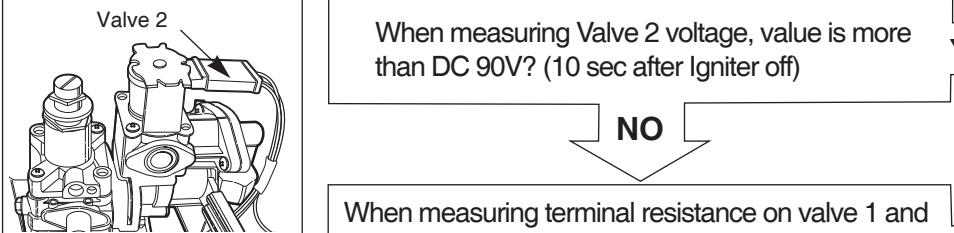
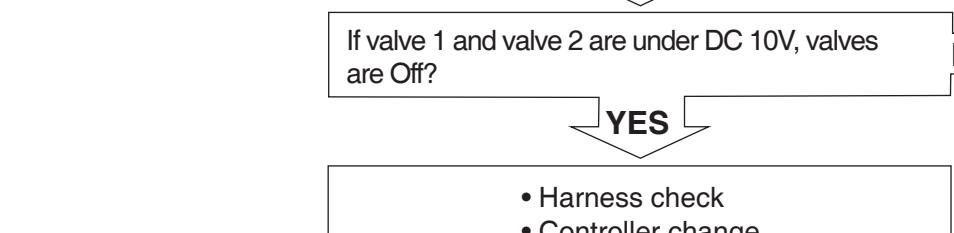
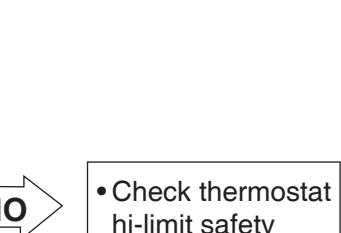
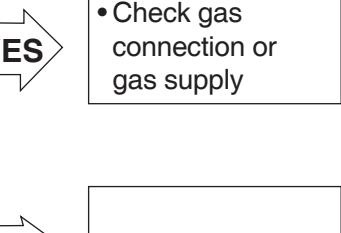
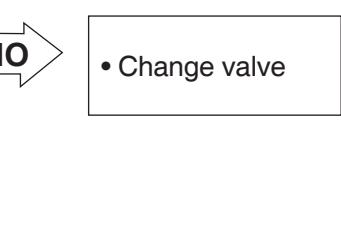
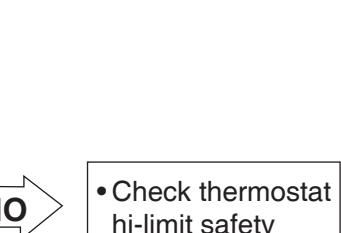
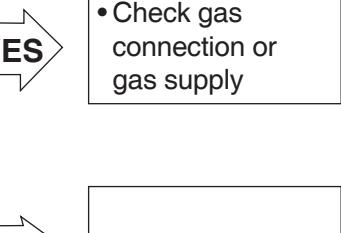
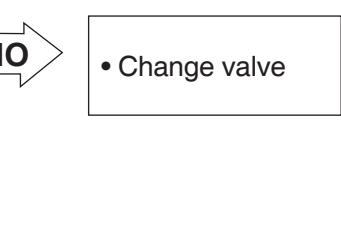
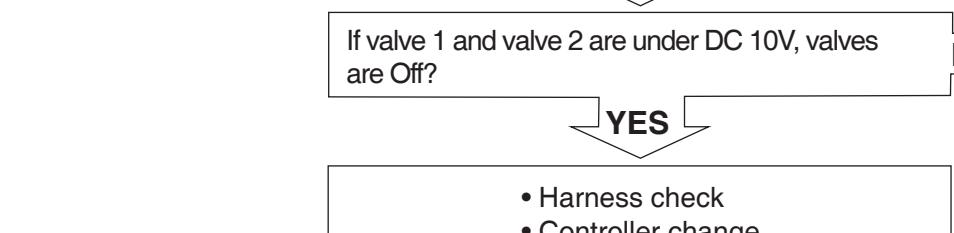
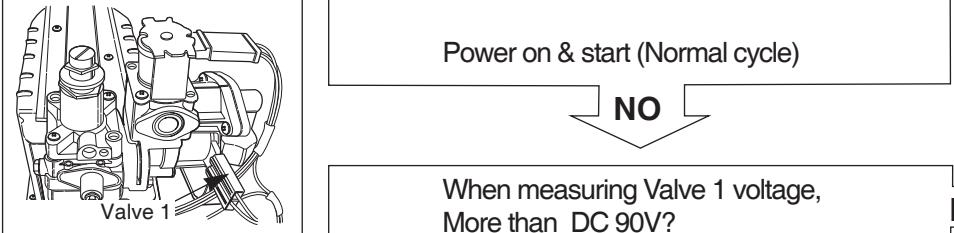
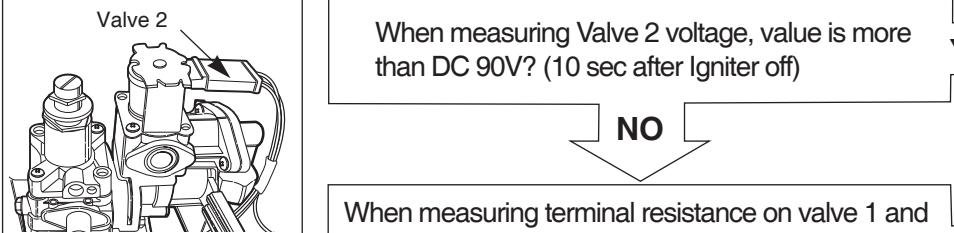
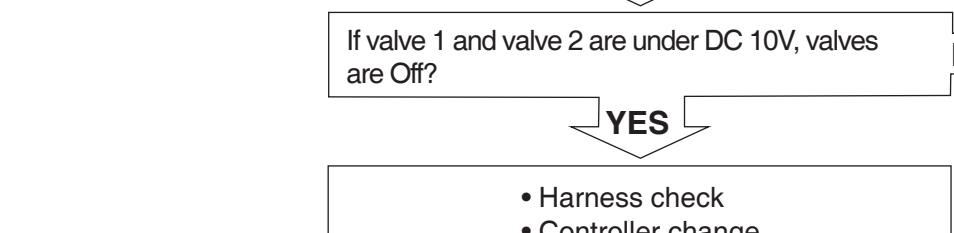
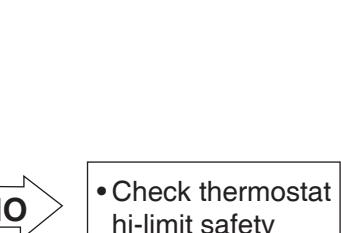
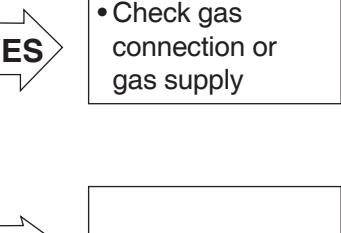
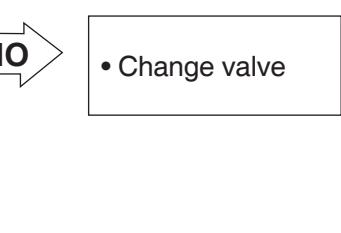
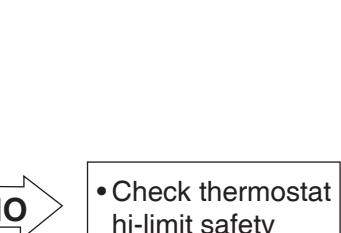
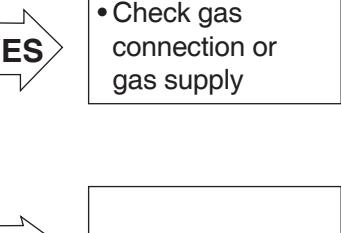
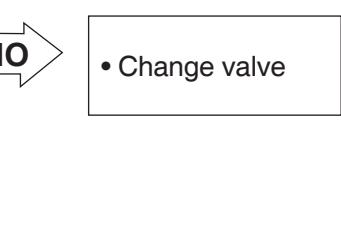
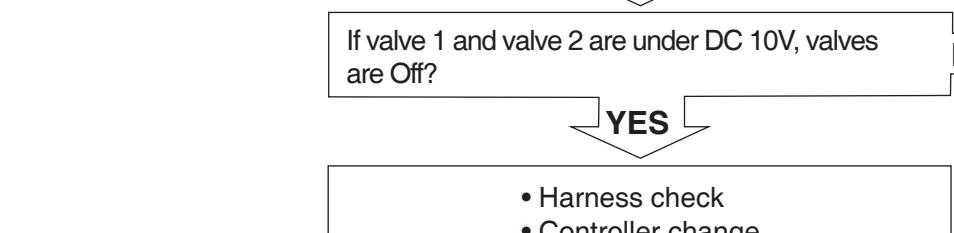
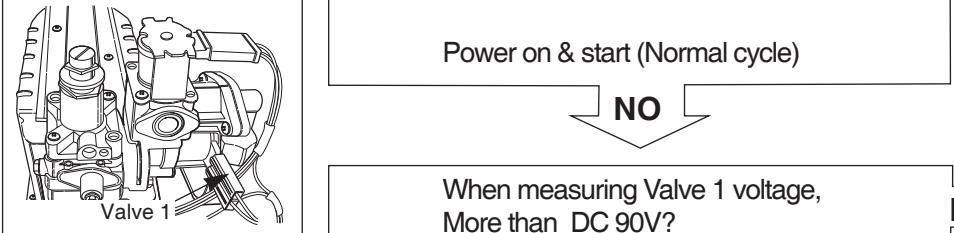
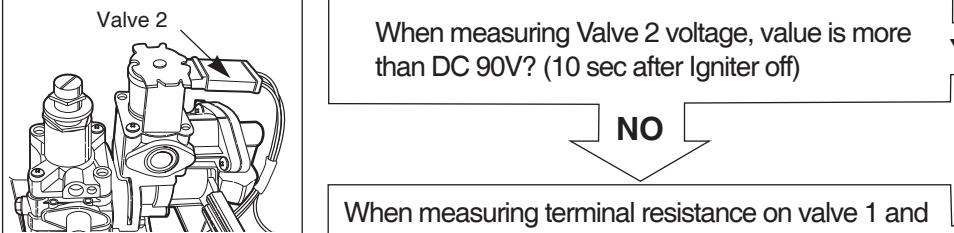
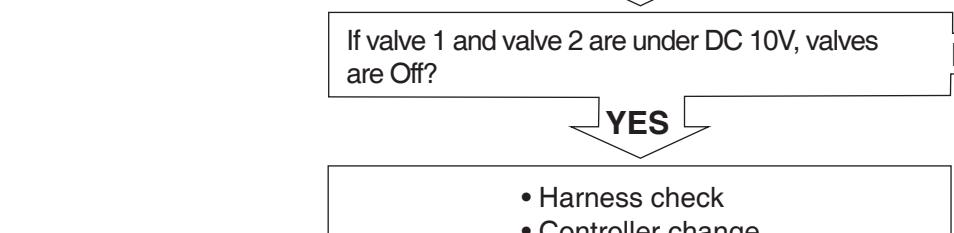
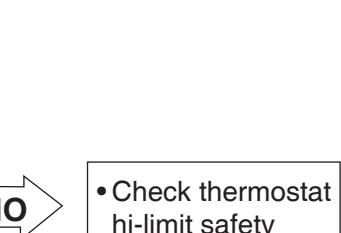
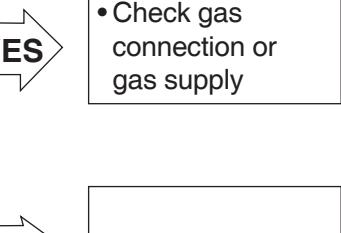
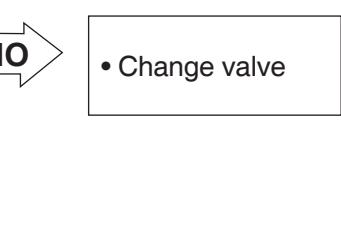
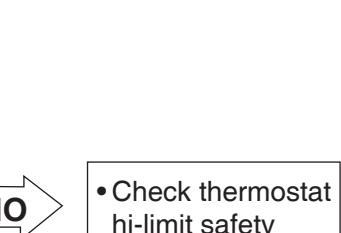
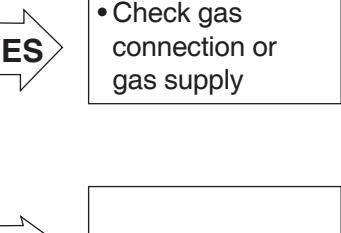
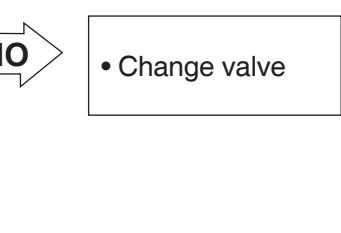
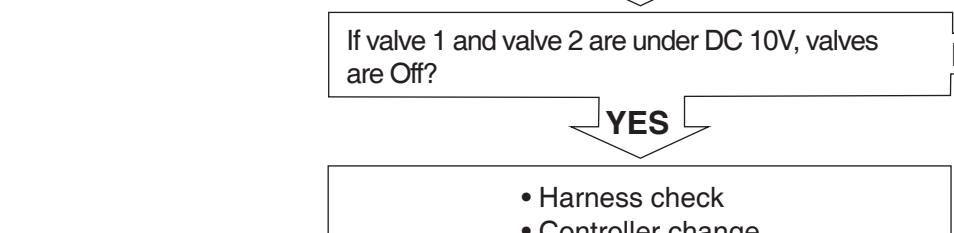
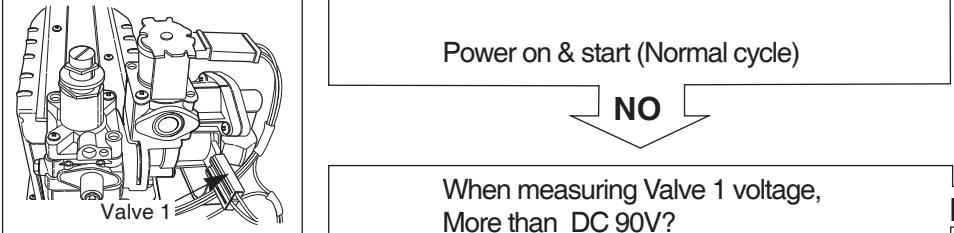
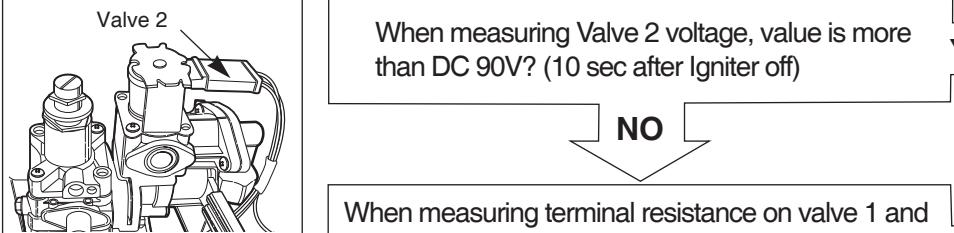
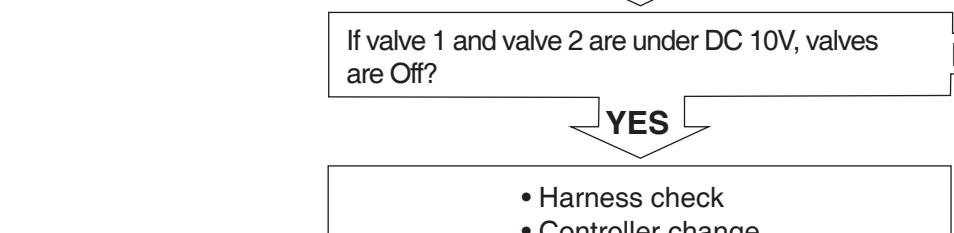
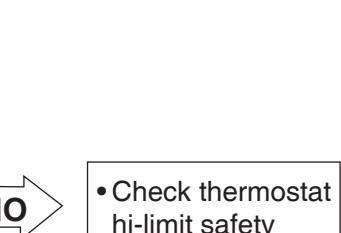
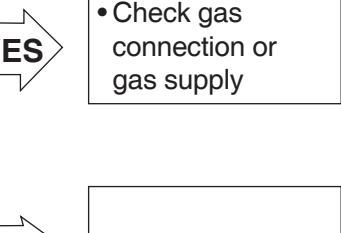
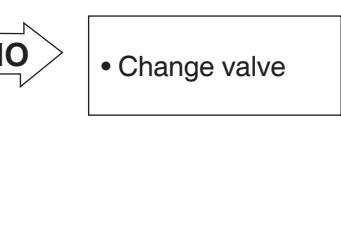
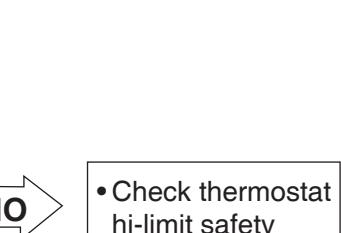
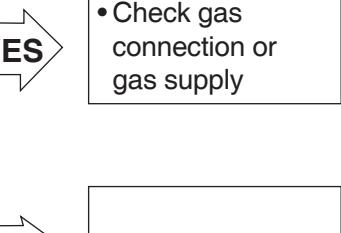
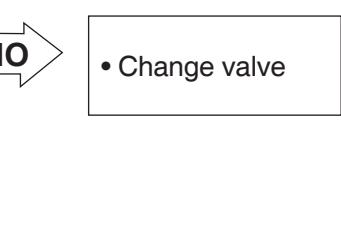
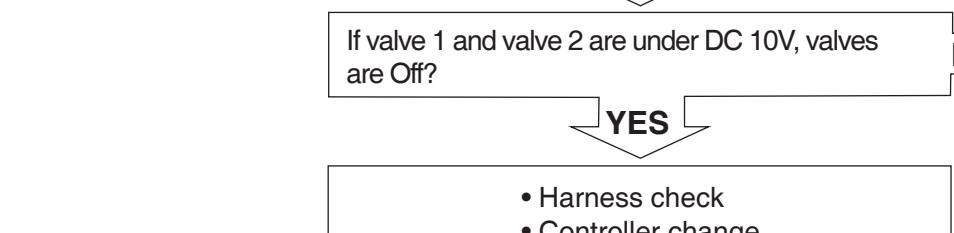
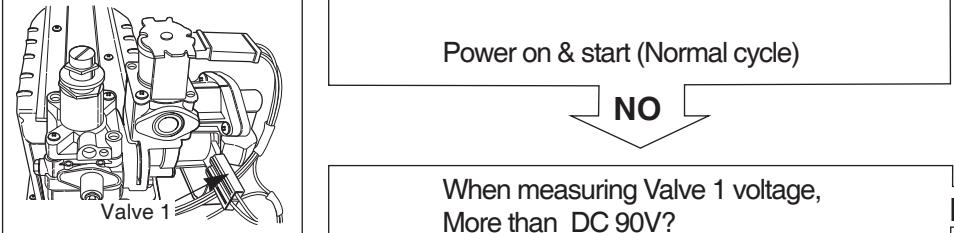
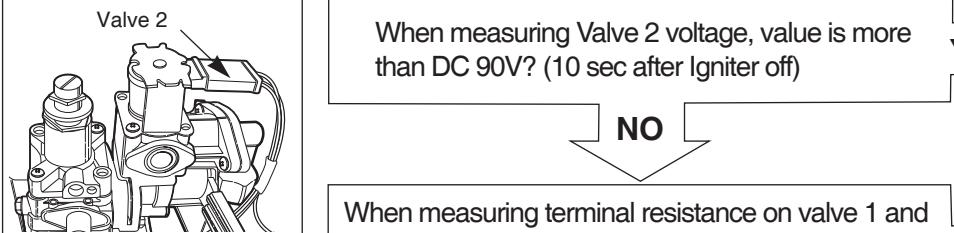
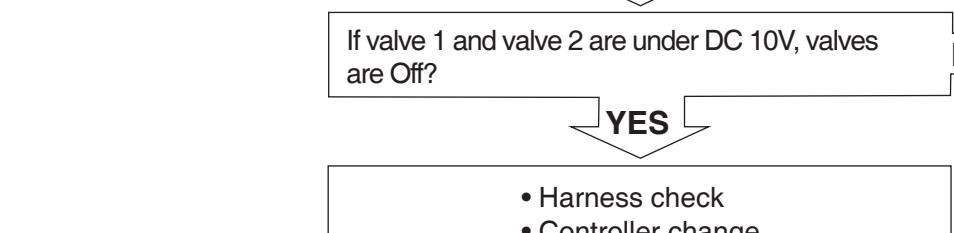
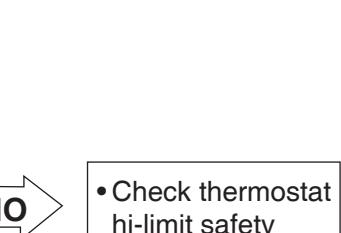
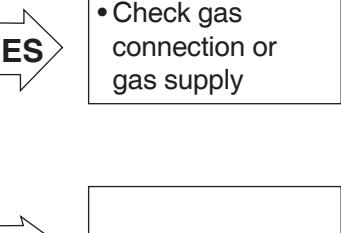
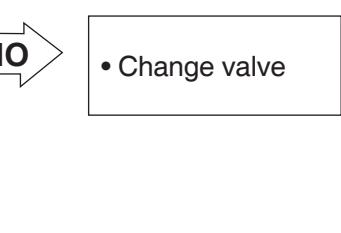
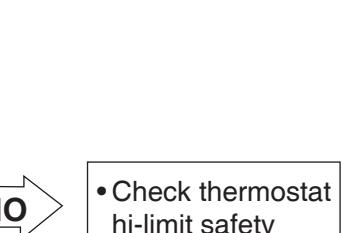
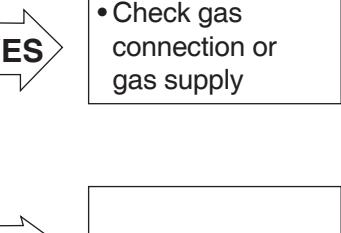
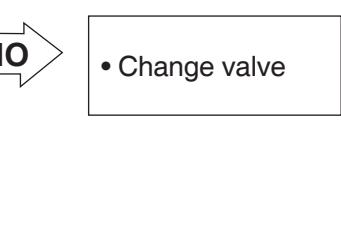
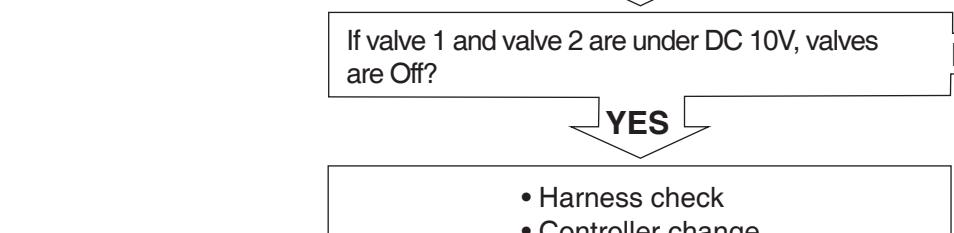
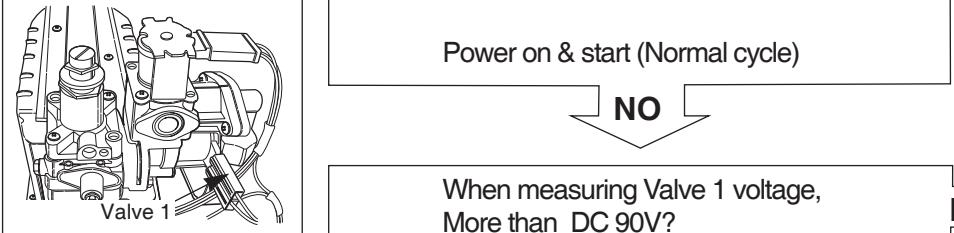
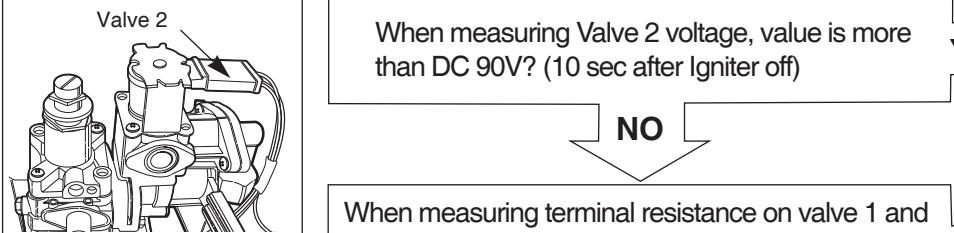
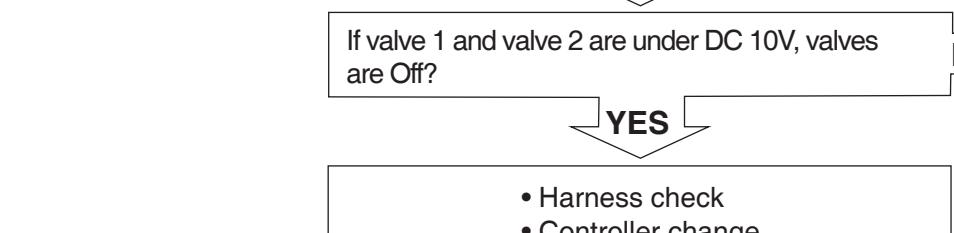
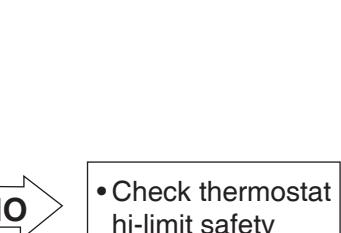
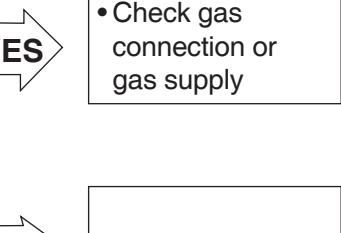
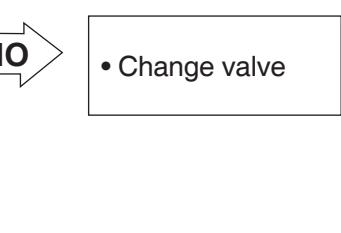
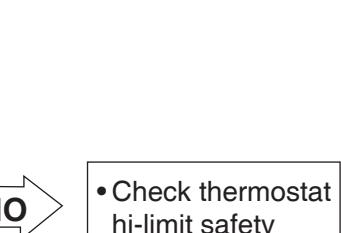
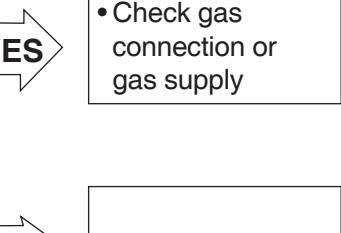
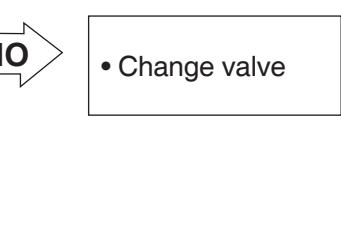
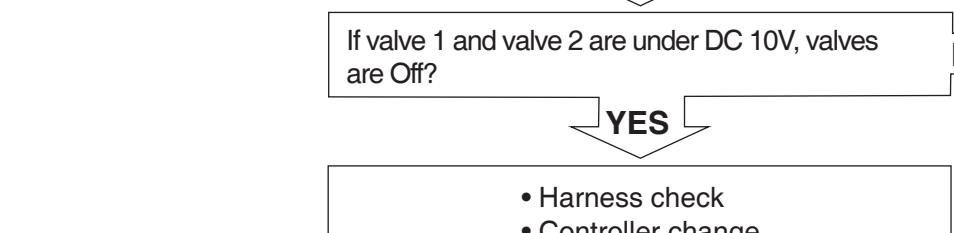
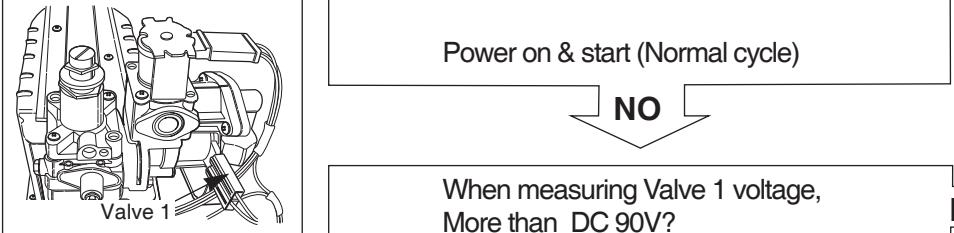
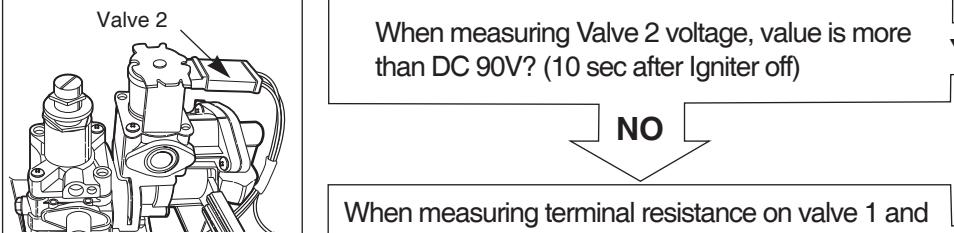
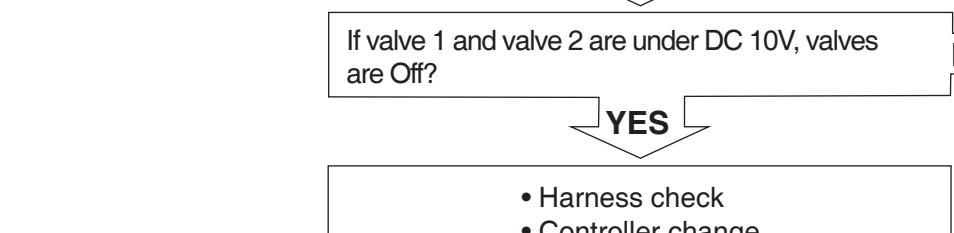
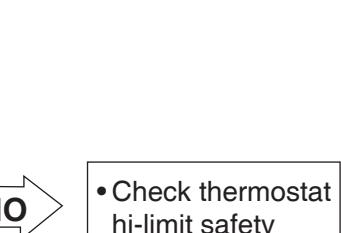
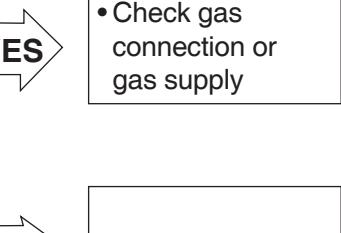
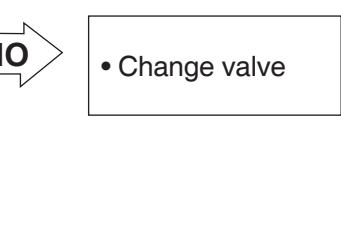
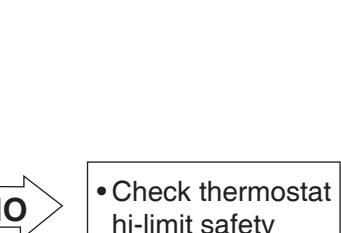
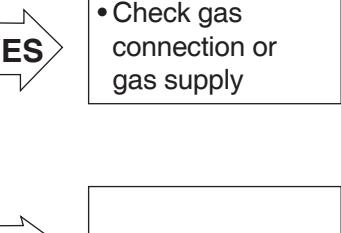
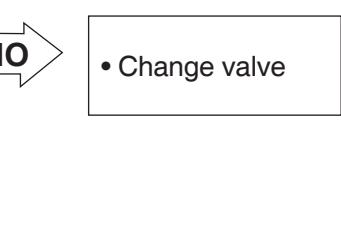
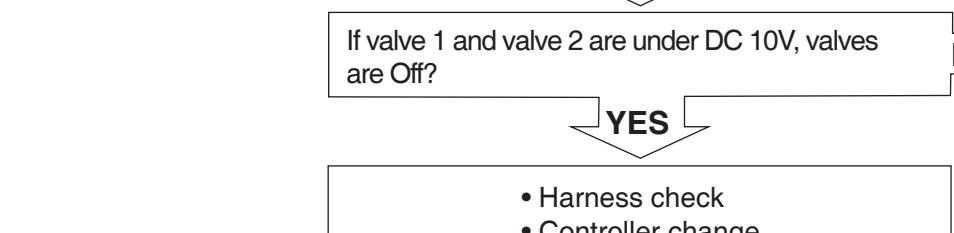
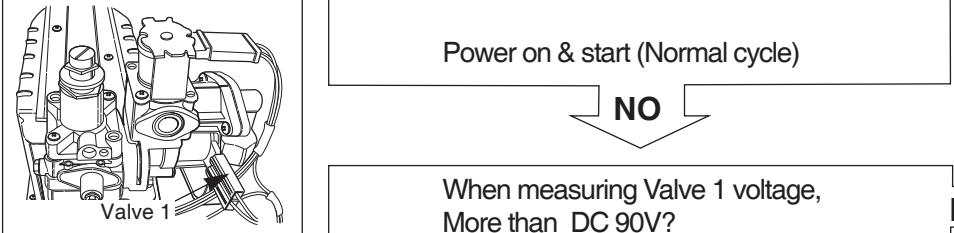
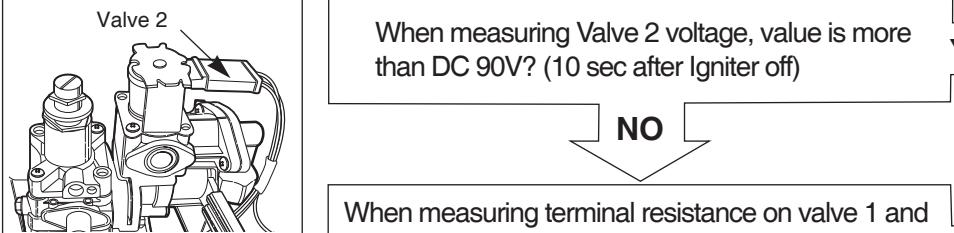
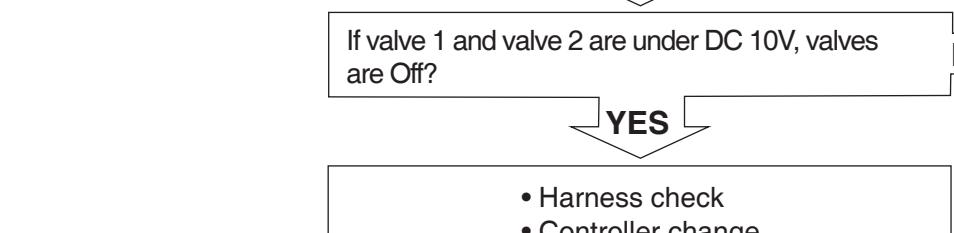
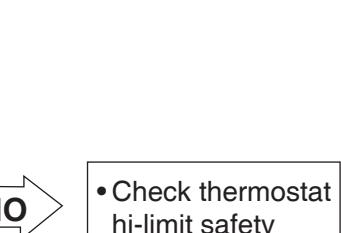
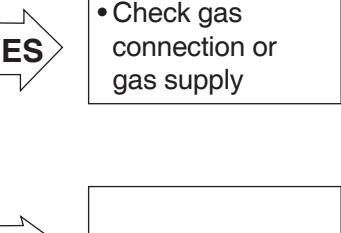
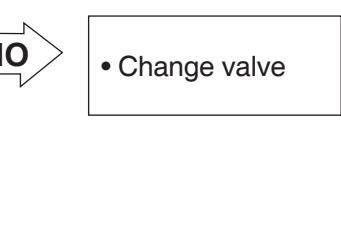
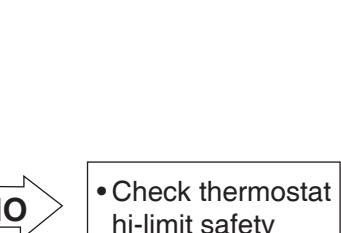
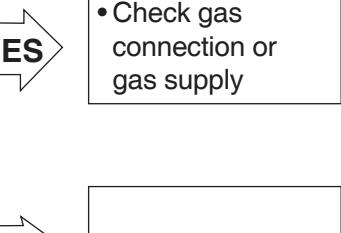
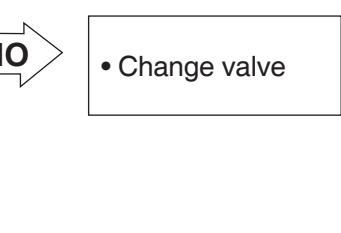
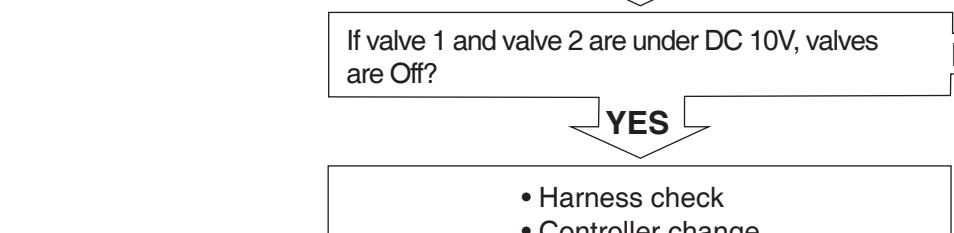
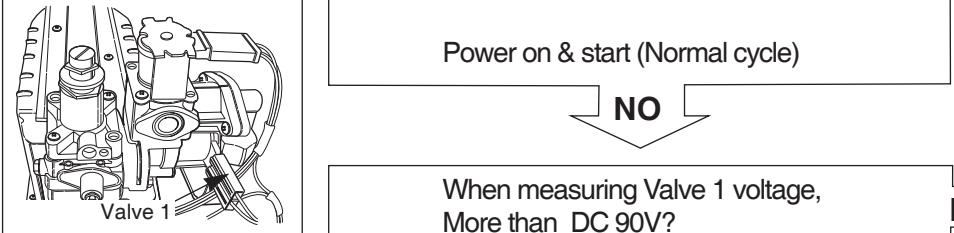
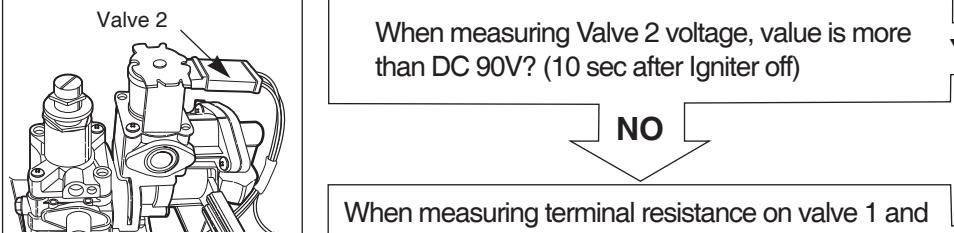
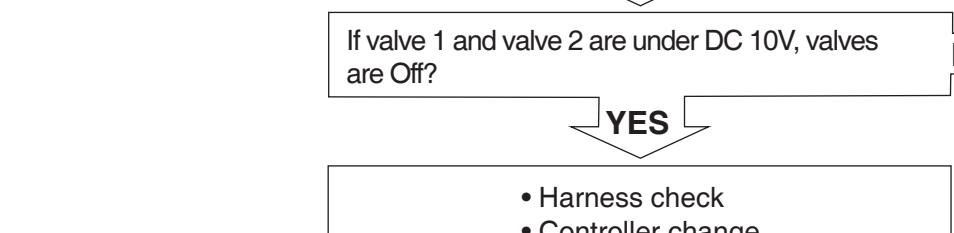
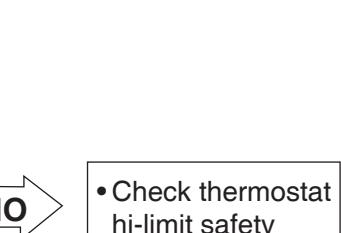
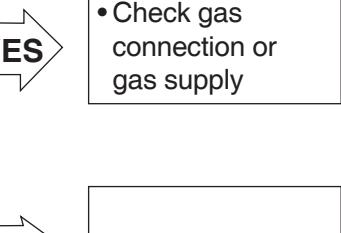
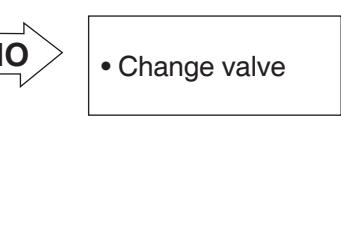
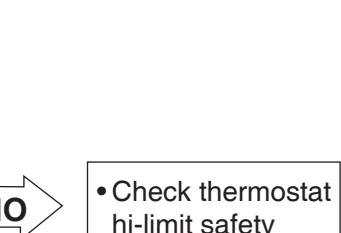
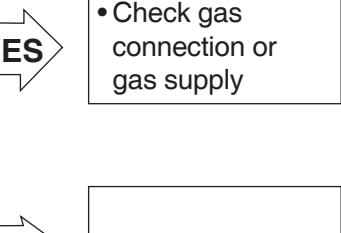
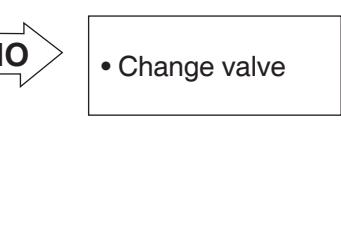
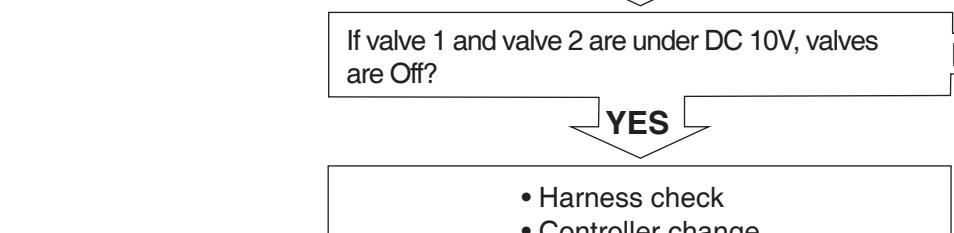
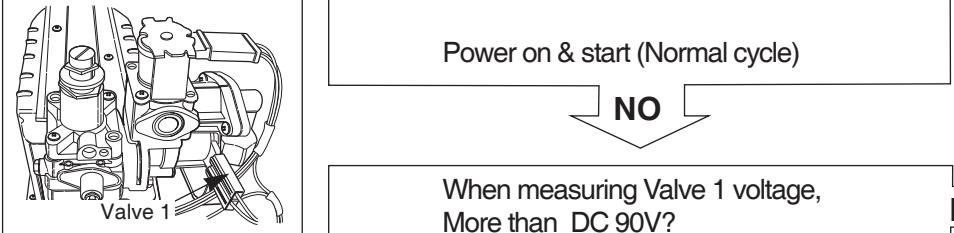
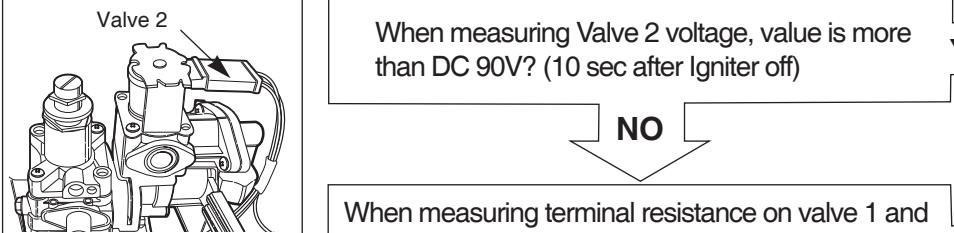
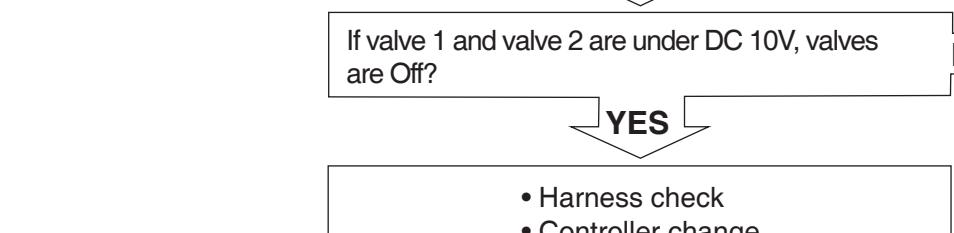
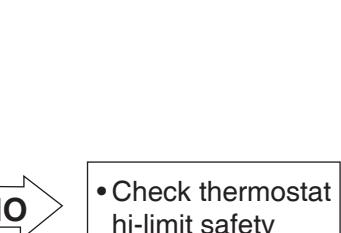
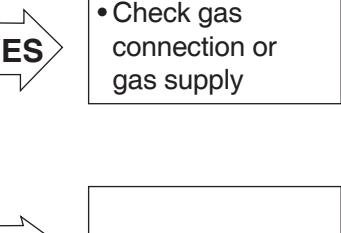
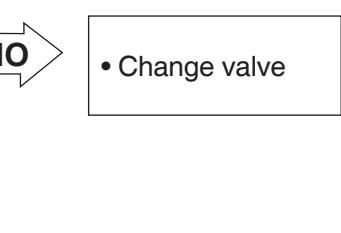
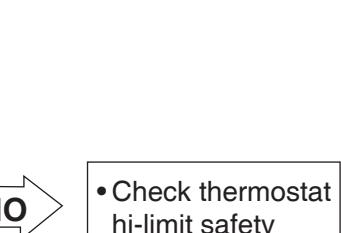
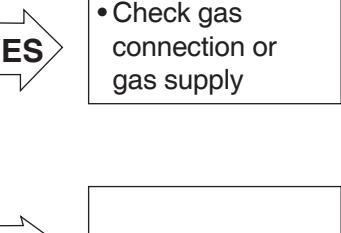
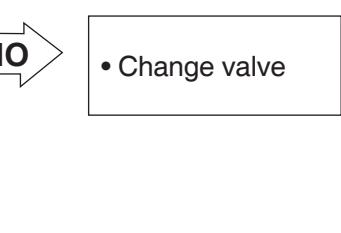
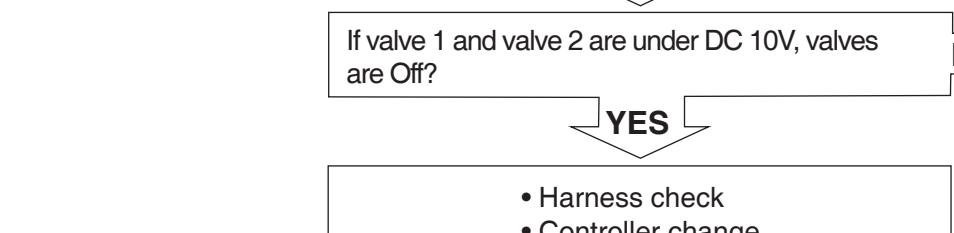
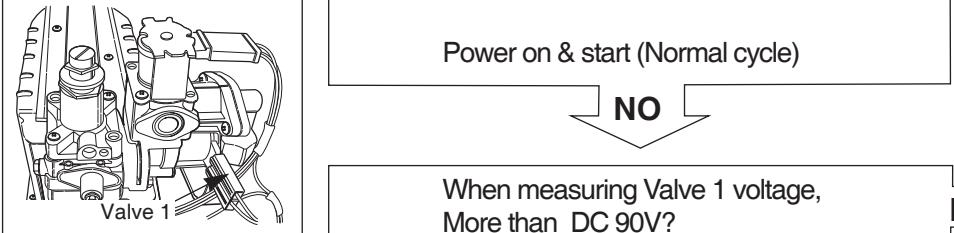
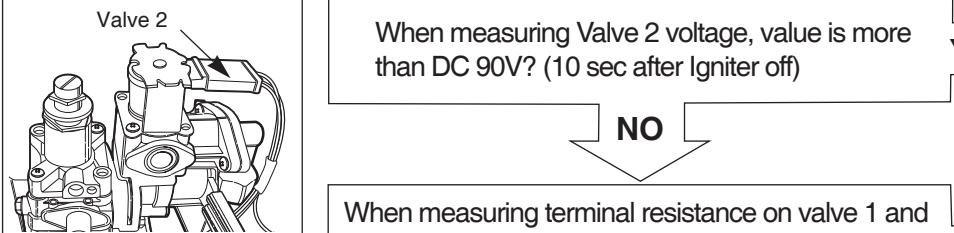
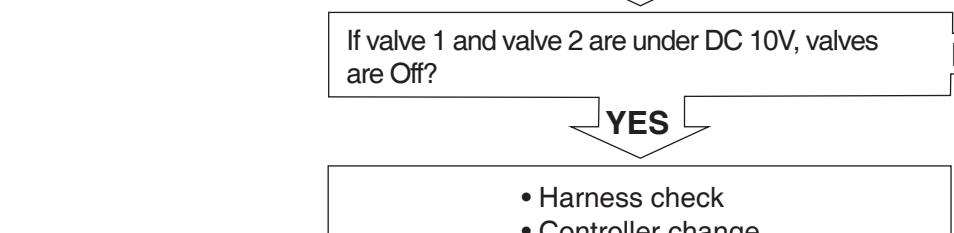
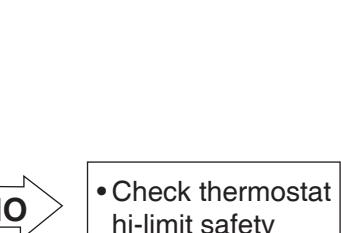
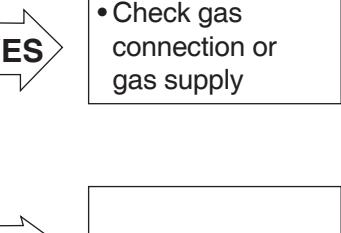
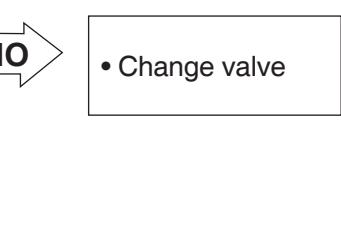
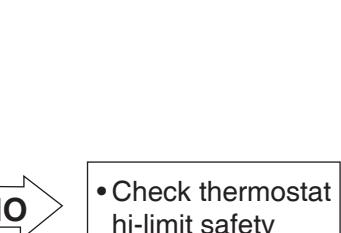
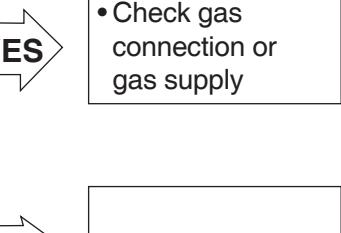
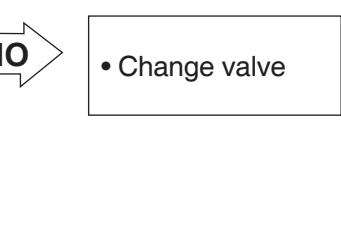
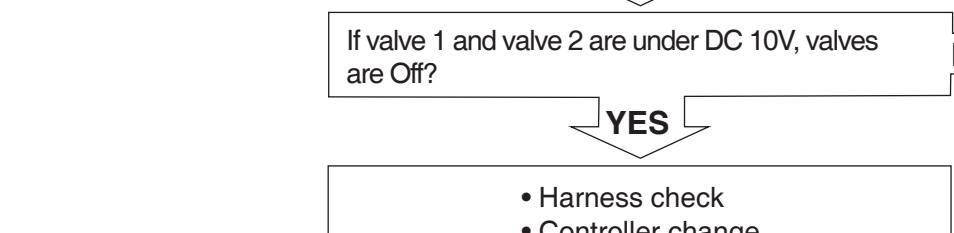
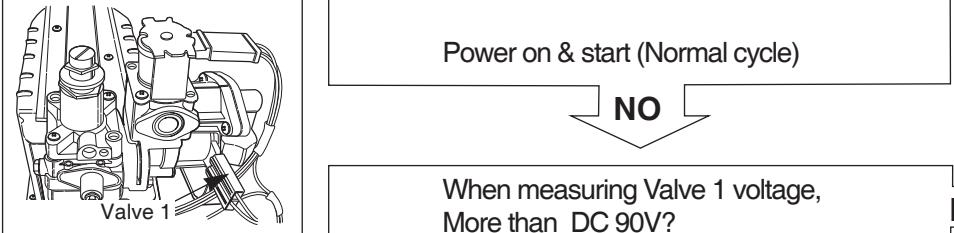
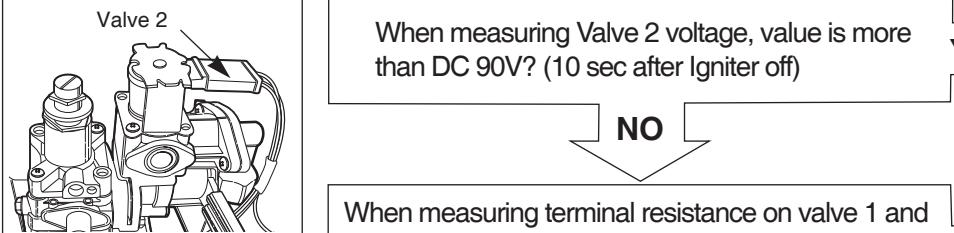
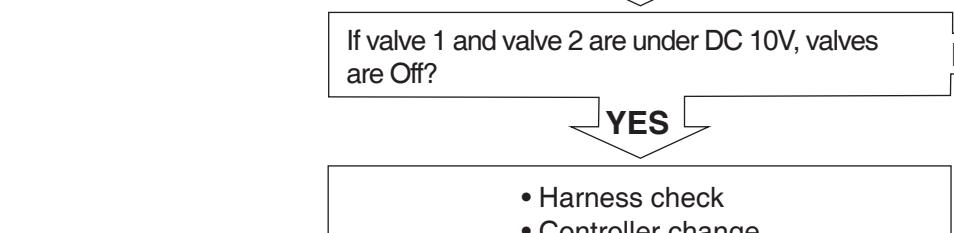
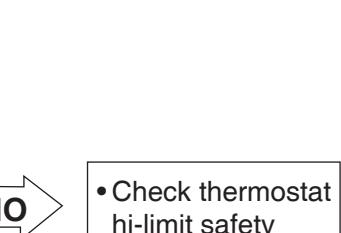
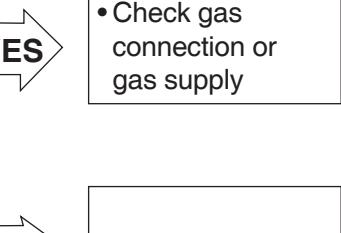
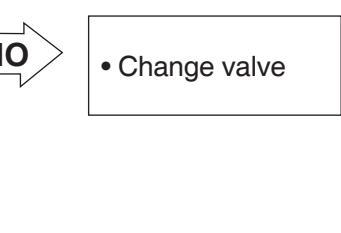
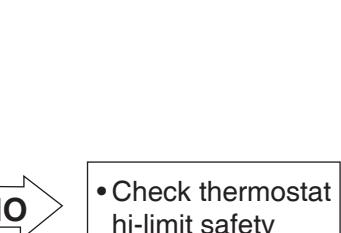
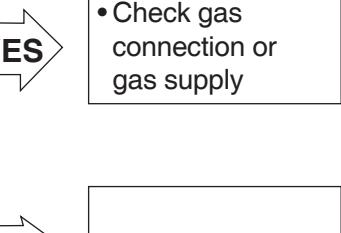
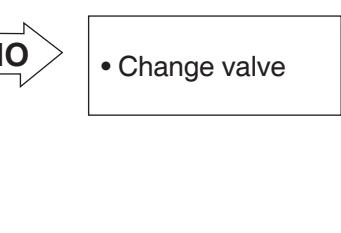
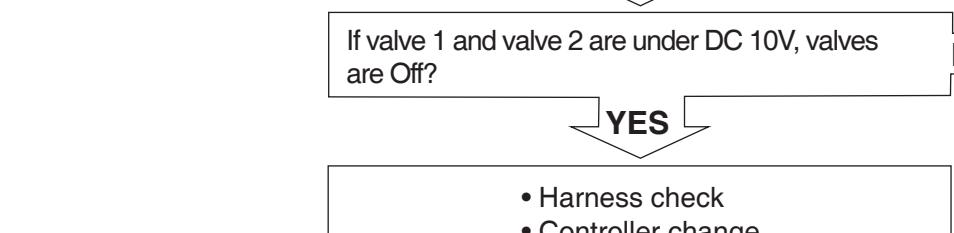
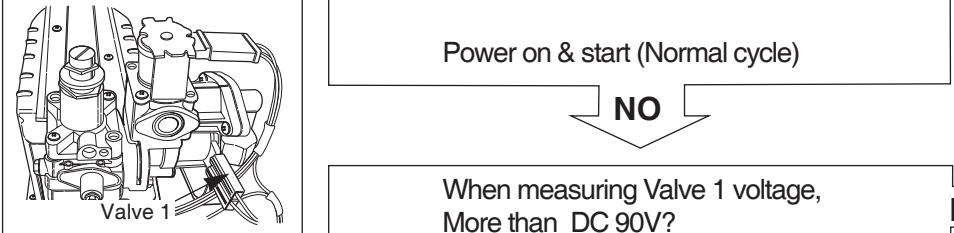
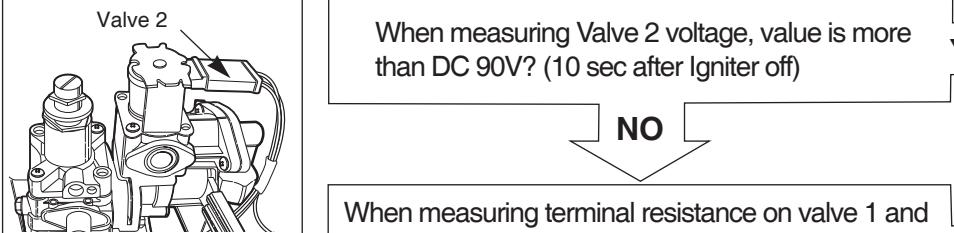
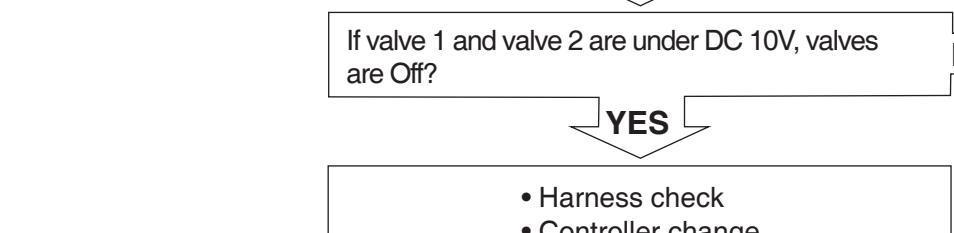
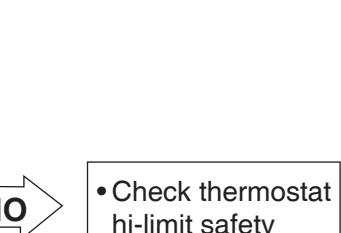
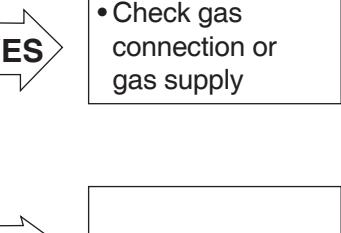
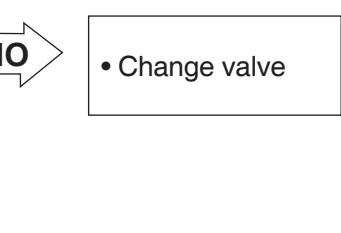
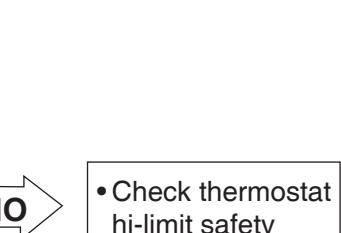
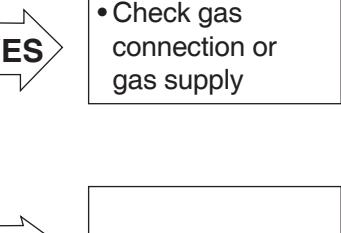
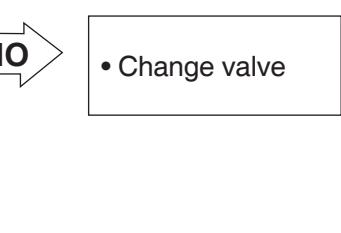
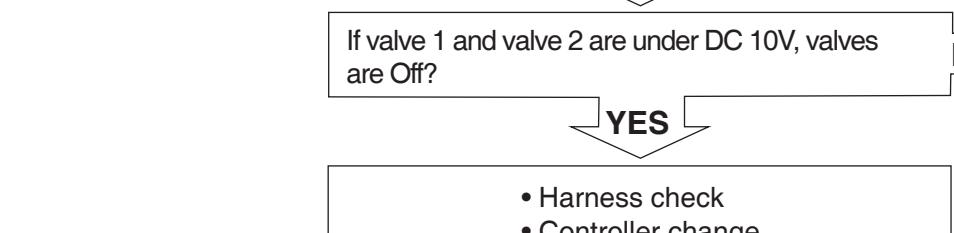
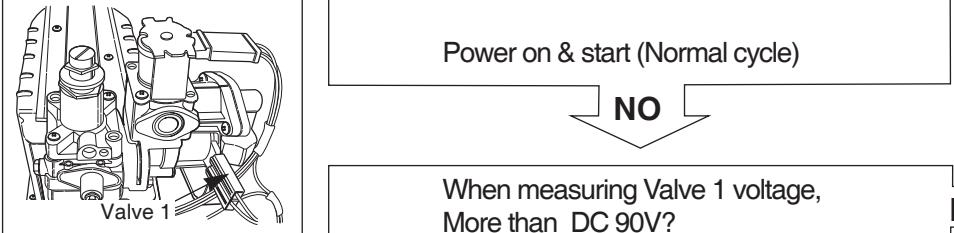
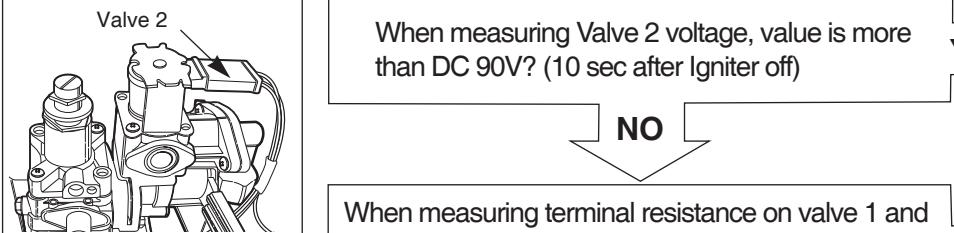
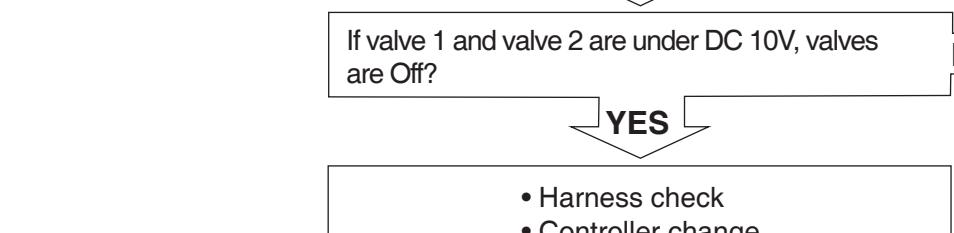
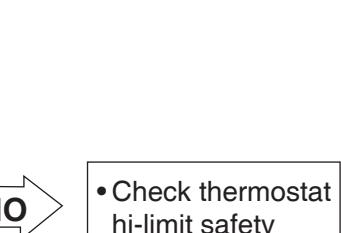
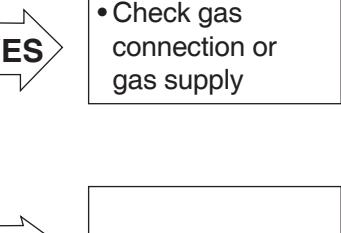
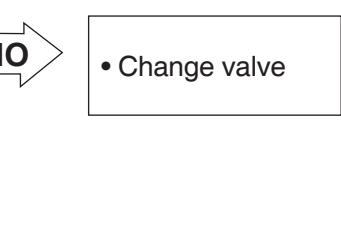
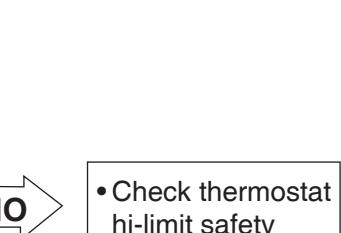
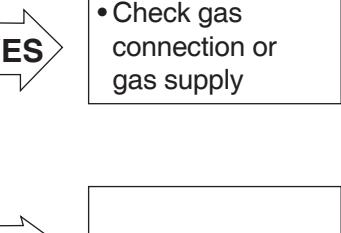
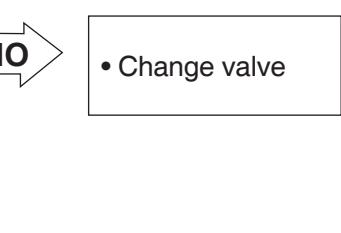
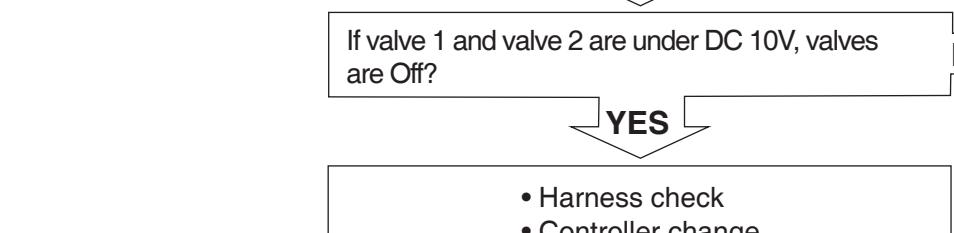
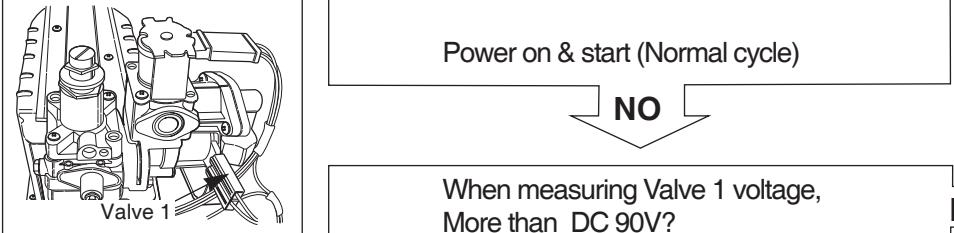
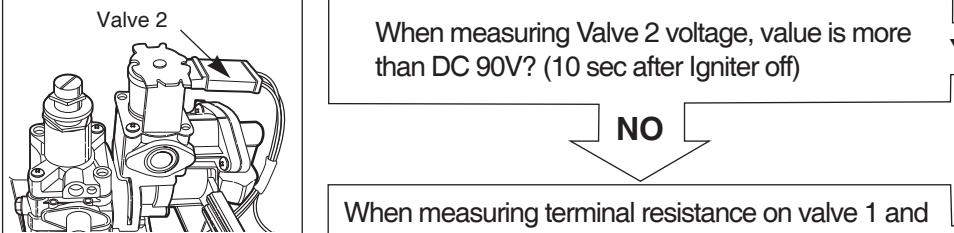
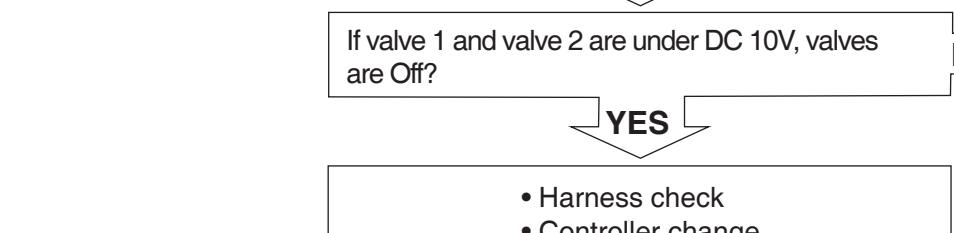
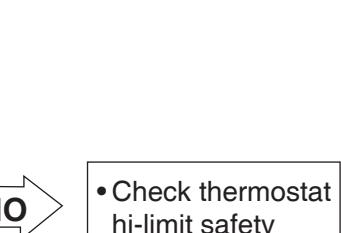
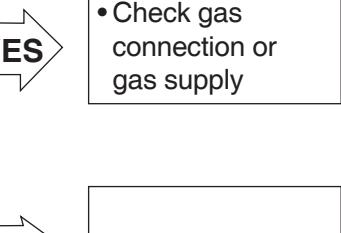
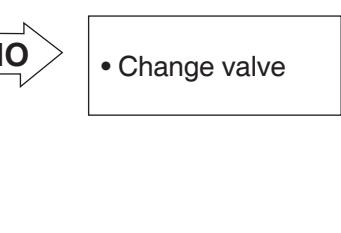
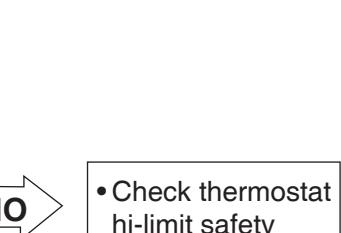
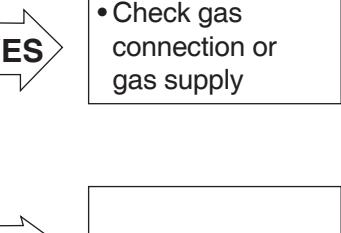
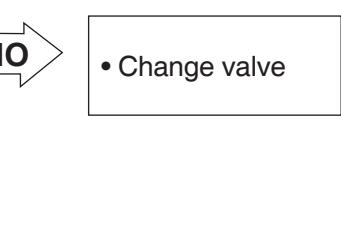
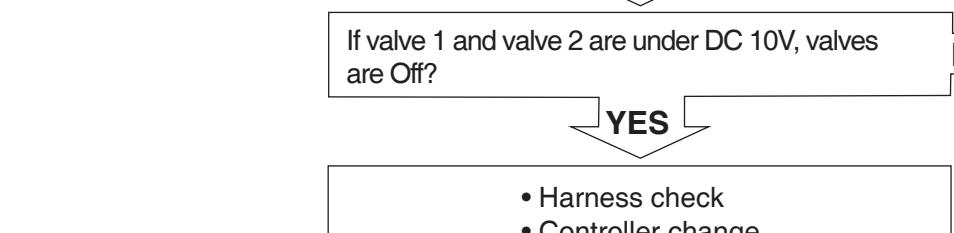
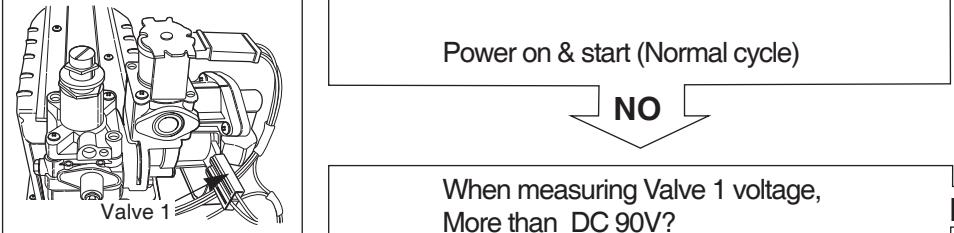
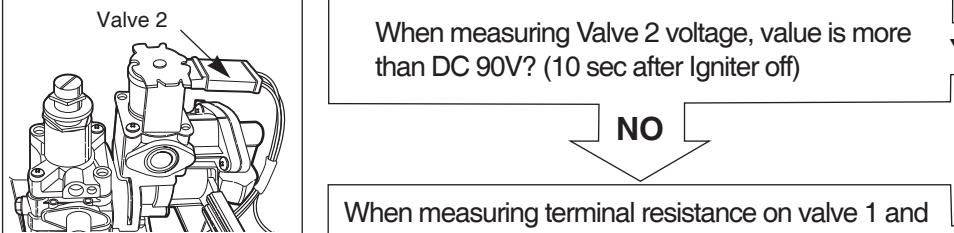
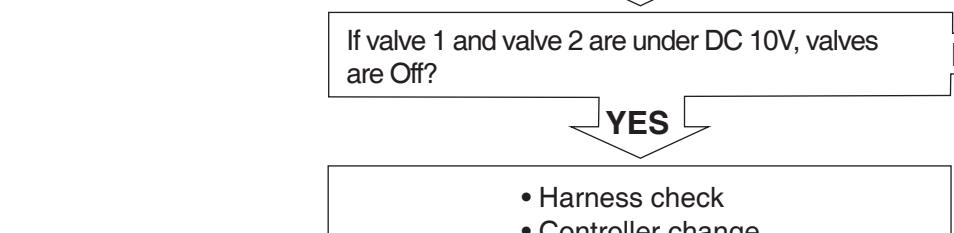
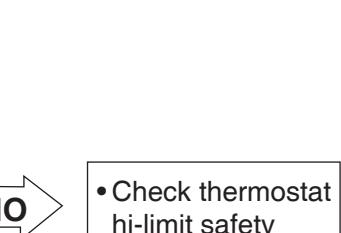
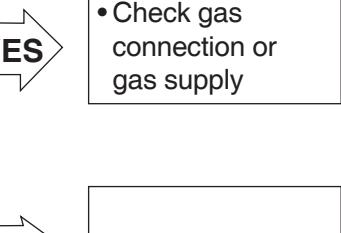
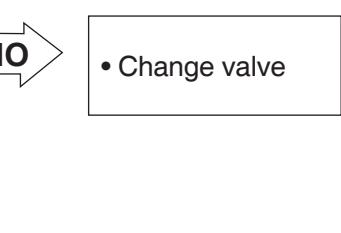
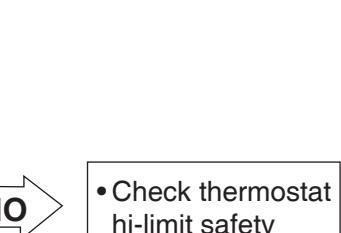
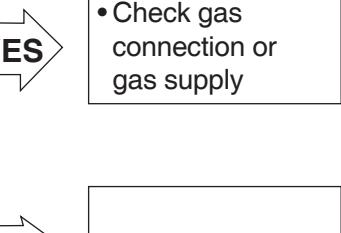
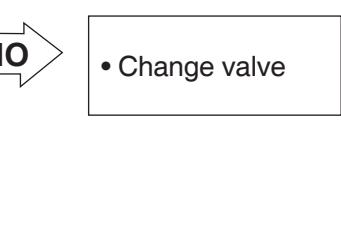
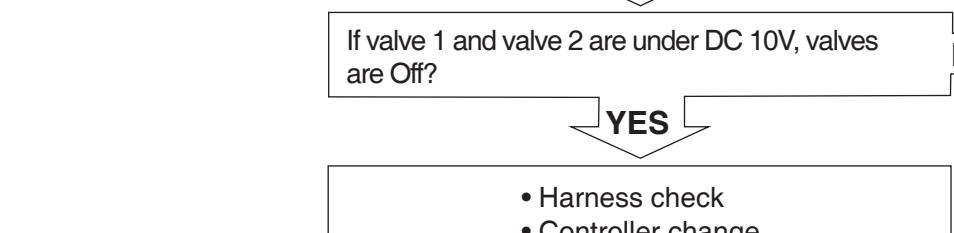
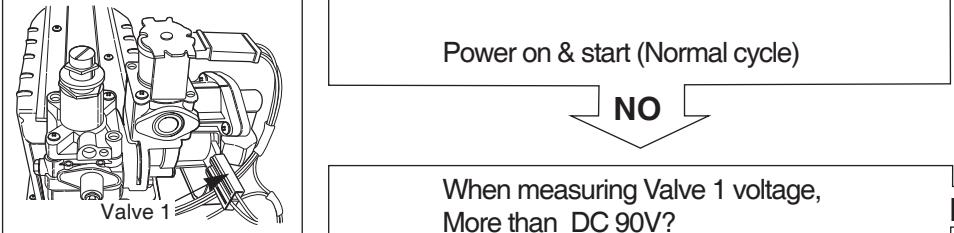
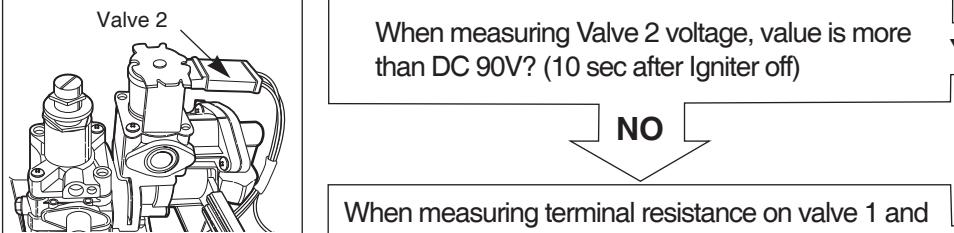
■ Test 6 Heater Switch Test - Electric Type

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with earth line.)		
Trouble Symptom	While operating, heating will not work. Drying time takes longer.		
Measurement Condition	After turning power off, measure the resistance.		
	 <ol style="list-style-type: none"> 1. Is resistance between heater terminal ① and ② below 18 ~ 22Ω? 2. Is resistance between heater terminal ① and ③ below 18 ~ 22Ω? 3. Is resistance between heater terminal ② and ③ below 9 ~ 11Ω? 	<p>NO</p> <p>• Replace heater.</p>	
	<p>YES</p>		
 <p>■ Only for FLOW SENSE model</p>	<p>Check if the value of measured resistance is below 1Ω between terminal TH2 (Safety thermostat).</p>	<p>NO</p> <p>• Replace TH2 (Safety thermostat) and TH3 (Hi-Limit thermostat)</p>	
 <p>■ Others</p>	<p>Check if the value of measured resistance is below 1Ω between terminal TH3 (Hi-Limit thermostat).</p>	<p>NO</p> <p>• Replace TH2 (Safety thermostat) and TH3 (Hi-Limit thermostat)</p>	
	<p>YES</p>		
	<p>Check motor. Check if the value of measured resistance is below 1Ω between terminal ① and ⑩ at RUN condition.</p>	<p>NO</p> <p>• Check motor and replace it.</p>	
	<p>YES</p>		
	<p>Check controller. Check Harness-linking connector.</p>		

※ Wires

- L2(Red)
- L2D(White) : Go to the duct (YL3 in main pcb)
- L2S(White) : Go to the safety.

■ Test 7 GAS Valve Test - Gas Type

Caution	When measuring power, be sure to wear insulated gloves, to avoid electric shock.
Trouble Symptom	While operating, heating will not work. Drying time takes longer
Measurement Condition	With dryer power on
	 <p>Power on & start (Normal cycle)</p> <p>When measuring Valve 1 voltage, More than DC 90V?</p> <p>Igniter operates? (after 1 min, igniter becomes reddish)</p> <p>When measuring Valve 2 voltage, value is more than DC 90V? (10 sec after Igniter off)</p> <p>When measuring terminal resistance on valve 1 and valve 2, valves are more than $1.5 \sim 2.5\text{k}\Omega$? (Measure after off)</p> <p>If valve 1 and valve 2 are under DC 10V, valves are Off?</p> <p>                                                    

                                                        

                                                        

                                                        

                                                        

                              <img alt="Diagram of the gas valve</p> |

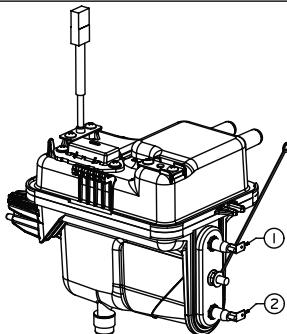
■ Test 8 Motor Assembly, DC, Pump

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with earth line.)
Trouble Symptom	During diagnostic test, E5 error occur.
Measurement Condition	Turn the dryer's power off, then measure resistance.
<p>After activating the *diagnostic test, press START/PAUSE button 4 times. Is AD value displayed higher than 10 ?</p> <p>YES</p> <p>Normal condition</p> <p>NO</p> <p>• Replace the DC pump</p>	

* diagnostic test : go to page 23

■ Test 9 Generator Assembly

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with earth line.)
Trouble Symptom	① During Steam cycle, generator assembly is not heating. ② During diagnostic test, tE4 error occur.
Measurement Condition	Turn the dryer's power off, then measure resistance.



Is resistance 14.3 ($\pm 5\%$) between heater terminal ① and ②?

NO

- Replace the DC Pump assembly
- If measured resistance value is , replace the generator assembly, too.

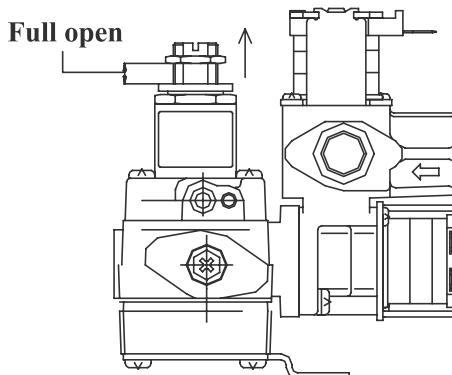
YES

Normal condition

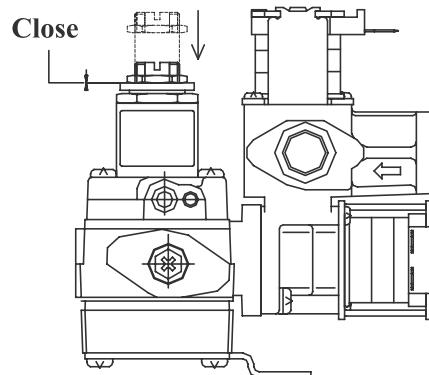
⚠ Warning

The dryer must be used with the correct gas. If the dryer is converted to propane (LP.) using natural gas could result in fire, explosion, or personal injury. Conversion must be done a qualified technician.

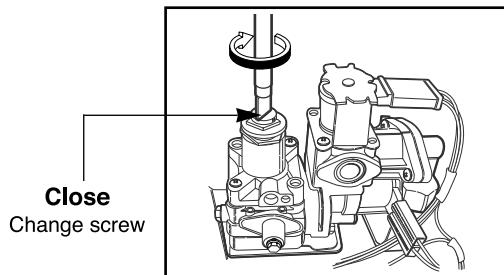
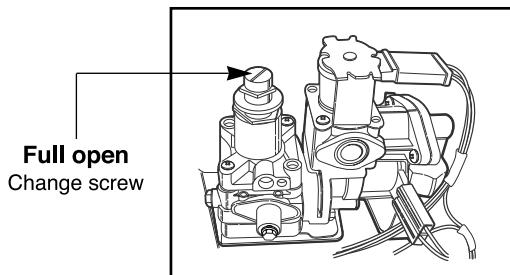
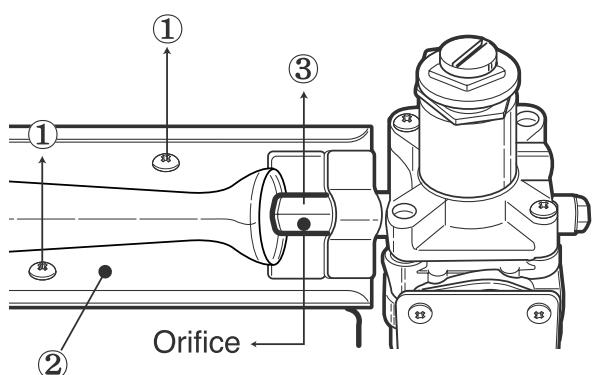
The dryer is set for natural gas at the factory. A propane conversion kit is available through the parts department to licensed technicians only. The part numbers are listed below.

STEP 1 : VALVE SETTING

NATURAL GAS SETTING



PROPANE GAS SETTING

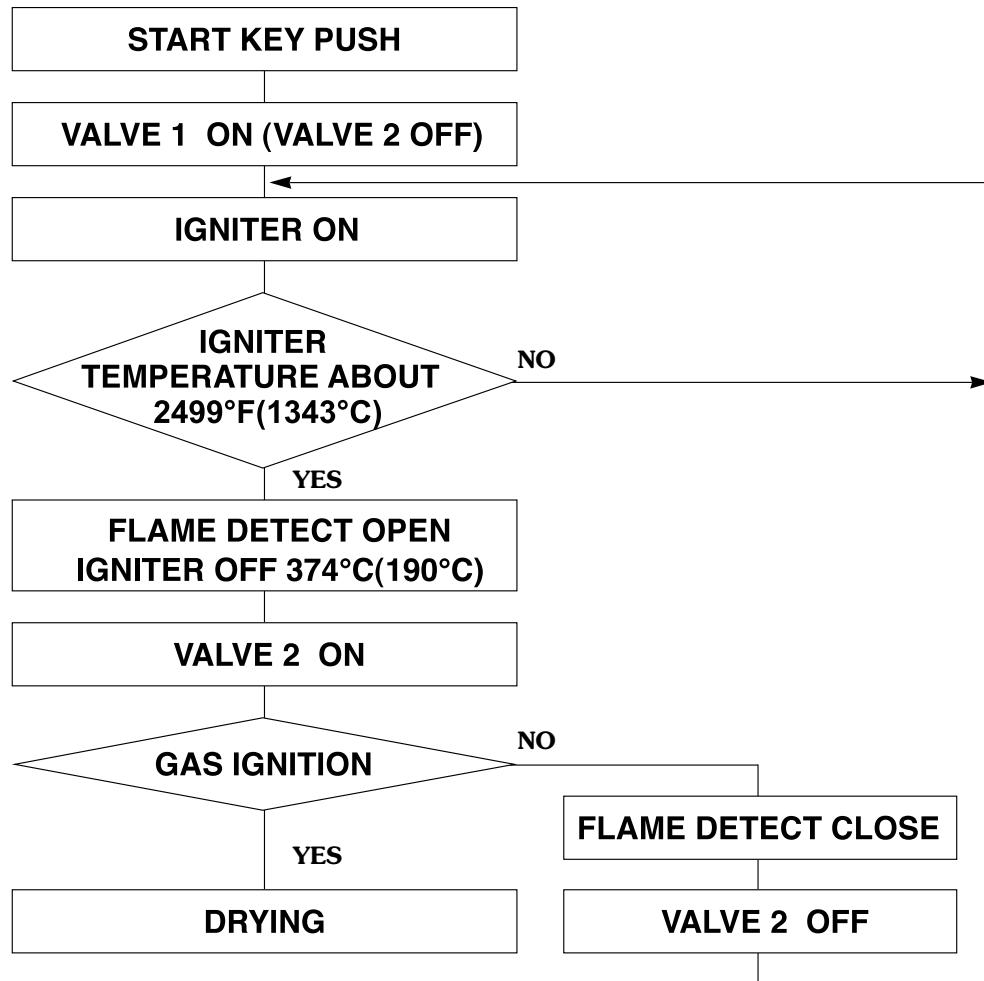
**STEP 2 : ORIFICE CHANGE**

- ① Remove 2 screws.
- ② Disassemble the pipe assembly.
- ③ Replace Natural Gas orifice with Propane Gas orifice.

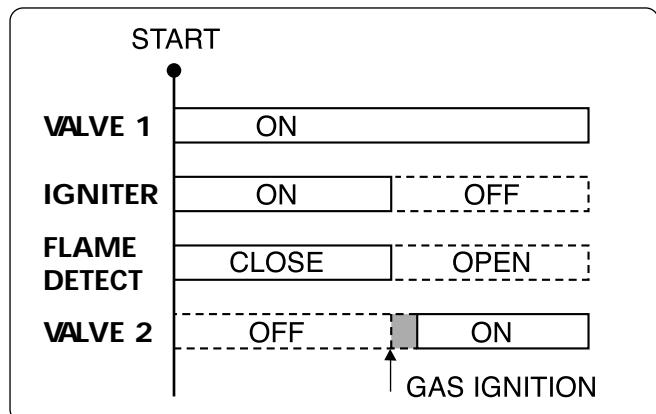
Gas type	Orifice P/No	Marking	Shape
Natural Gas	4948EL4001B	NCU	
Propane Gas	4948EL4002C	PCU	

* Kit contents Orifice (Dia. = 1.47mm, for Propane Gas)
Replace Label
Instruction sheet

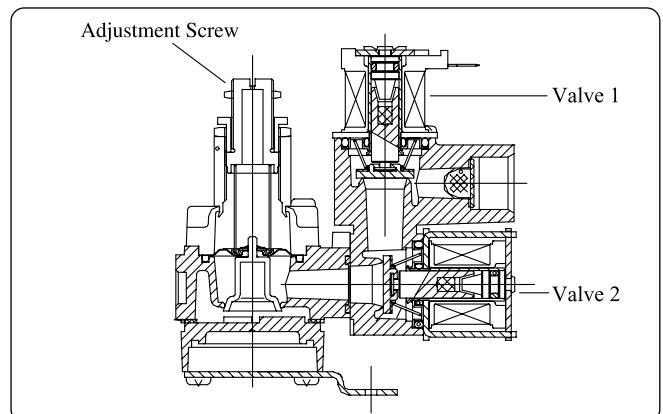
■ GAS VALVE FLOW



GAS IGNITION

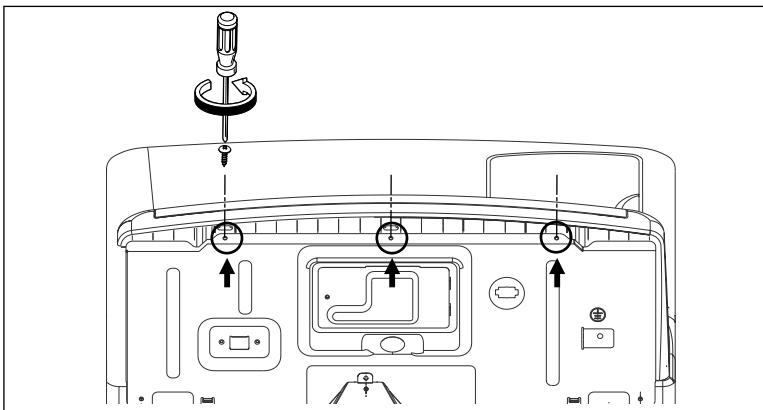


GAS VALVE STRUCTURE

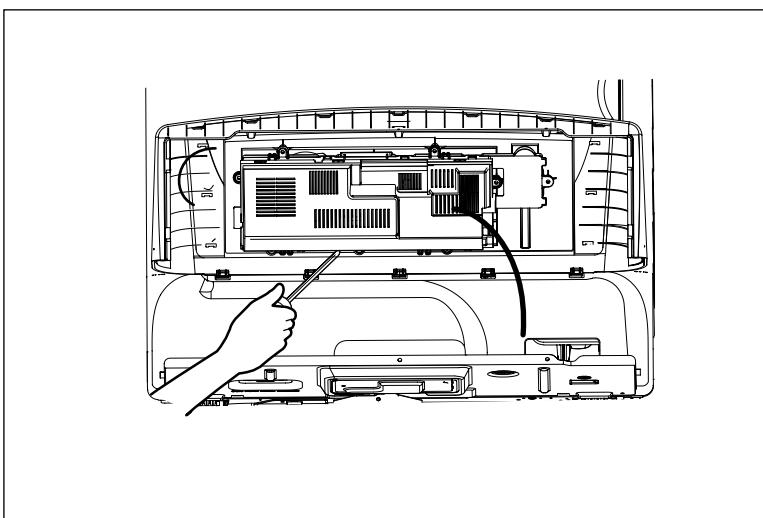


※ Disassemble and repair the unit only after pulling out power plug from the outlet.

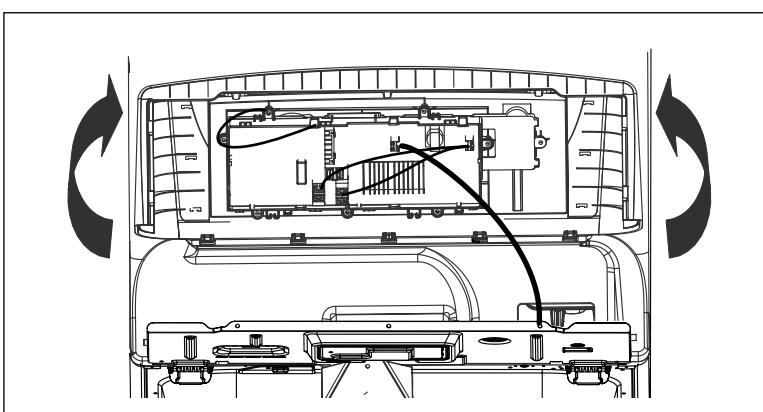
CONTROL PANEL ASSEMBLY



1. Remove the 3 screws from the back panel.



2. Place a towel over the top cover to prevent scratch to the surface. Gently lift each corner of the back panel, then roll it forward so it rests on top of the dryer.

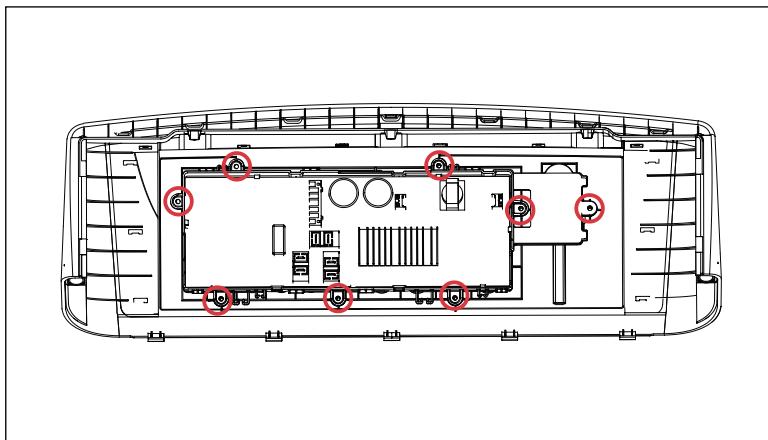


3. With a flat blade screwdriver, press the tabs on the side of the PWB (PCB) box and gently pry it open.

4. Disconnect the wiring from the PWB (PCB) board.

5. Disassemble the control panel assembly from top cover.

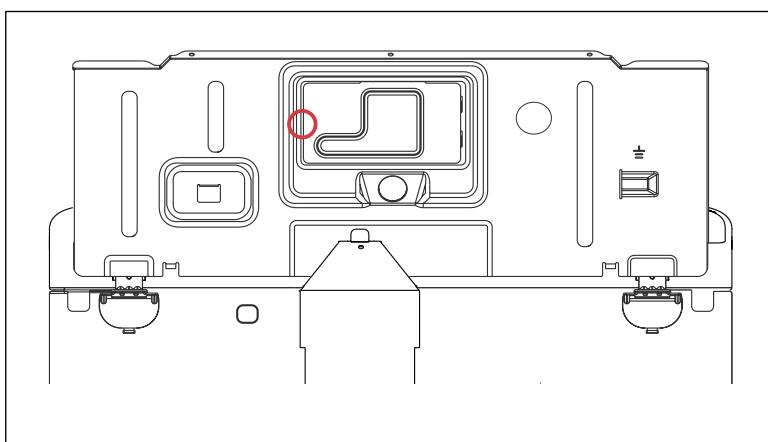
CONTROL PANEL



1. Remove 8 screws from control panel assembly.

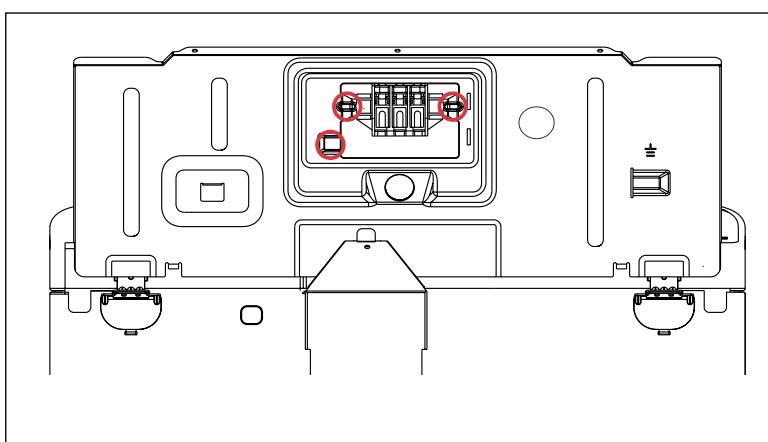
2. Separate PCB from control panel.

PANEL REAR [ELECTRIC]



1. Remove 1 screw.

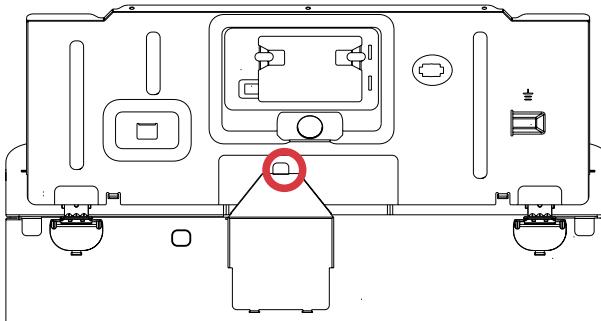
2. Pull out the cover.



1. Remove 3 screws.

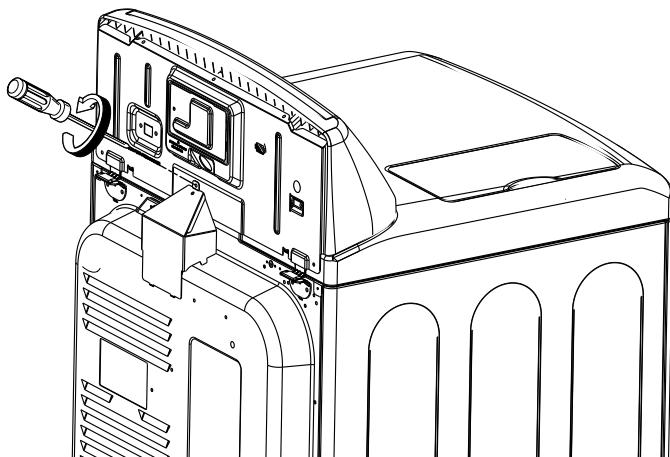
2. Disassemble terminal block and wire from panel rear.

PANEL REAR [COMMON]



1. Remove one screw for removing safety cover.
2. Remove 3 screws remained on the panel rear.
3. Lift out the panel rear.

TOP COVER

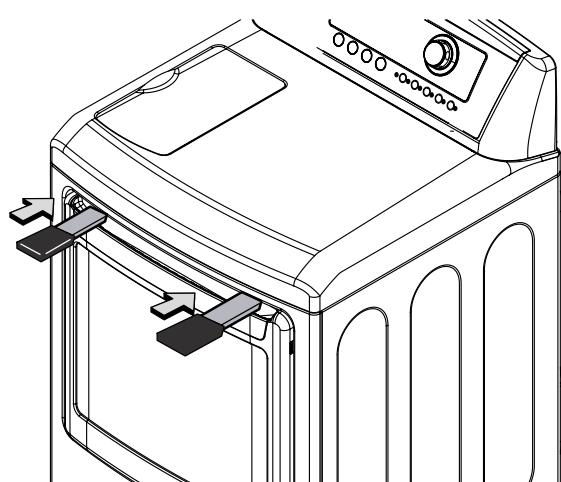


⚠ WARNING!

Before lifting the top cover, remove the safety cover.

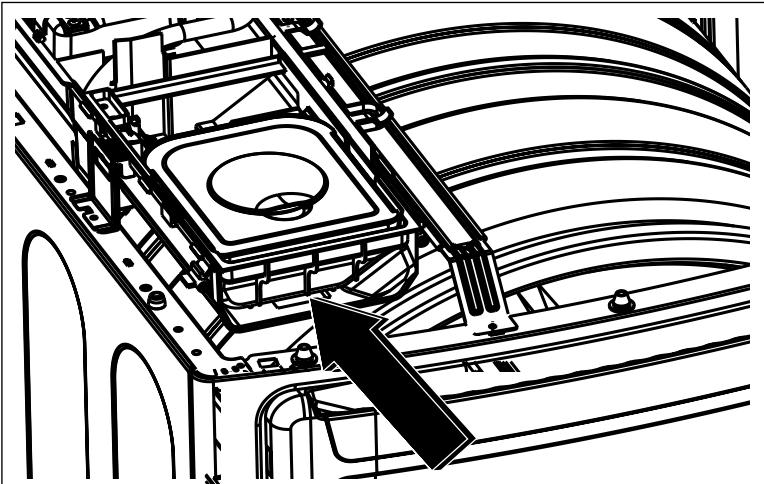
If you don't remove the safety cover, it will be destroyed.

when you press the holder, be careful scratch. For preventing the scratch, prepare the soft material.



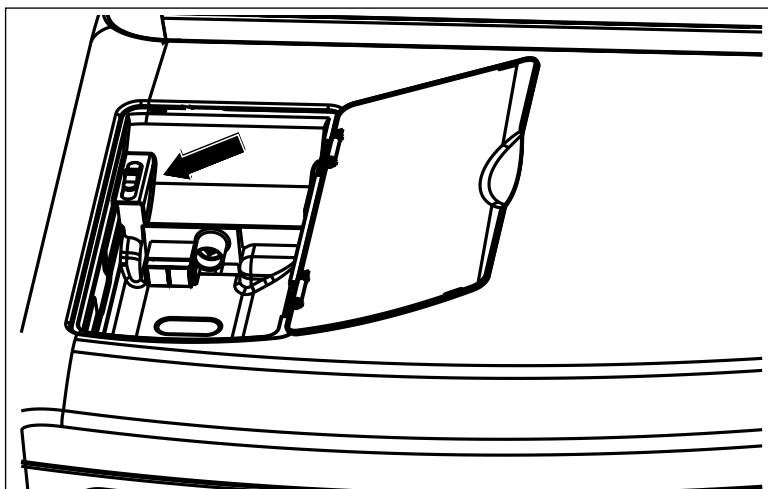
1. Remove 1 screw for lifting safety cover.
2. After checking the safety cover, press the holder with flat-tip screw driver inside the top cover.
3. Open the top cover.
4. Disassembly top cover from cabinet assembly.

TOP COVER [CLOSING]



⚠️ WARNING!

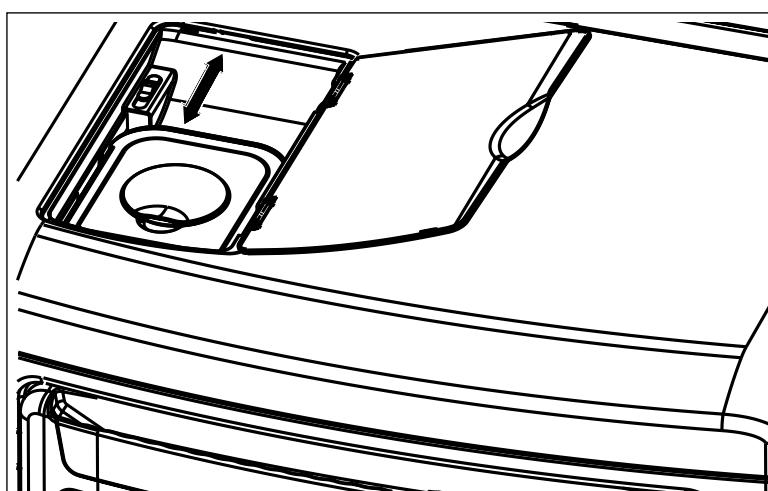
When you close the top cover, drawer has to be inserted to the end. Otherwise drawer will be stuck in the guide. And it will be destroyed.



1. Press the drawer to the end.

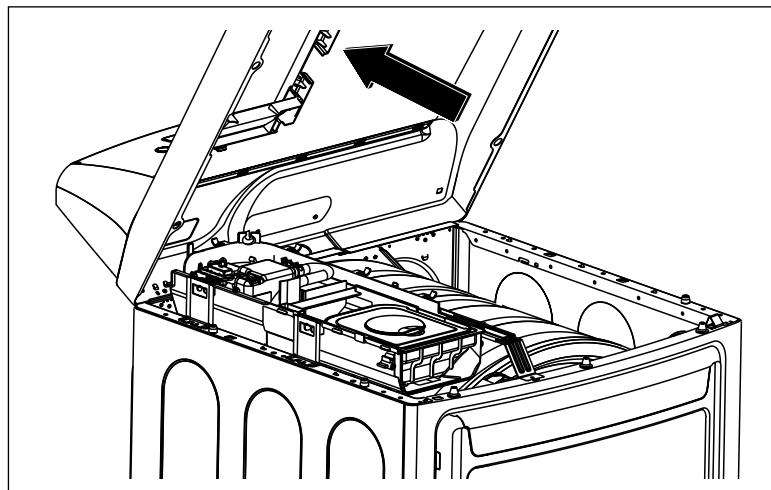
2. Put the locker into CLOSE.

3. Close the top cover.

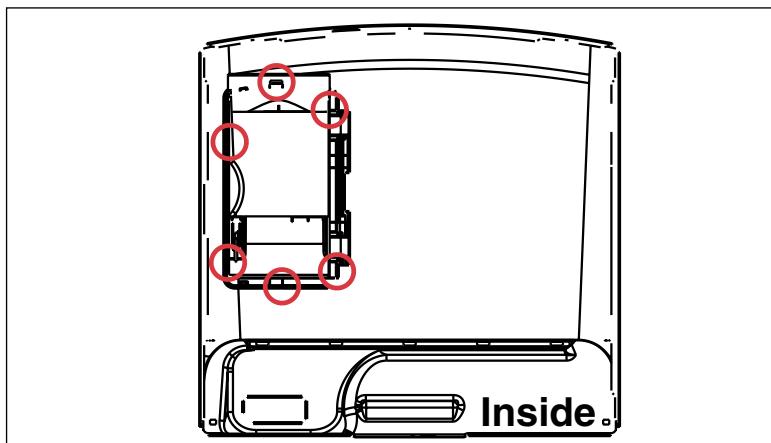


4. Test moving of the locker to make sure the drawer is properly located and the locker is operated correctly.

FRAME BODY & LID

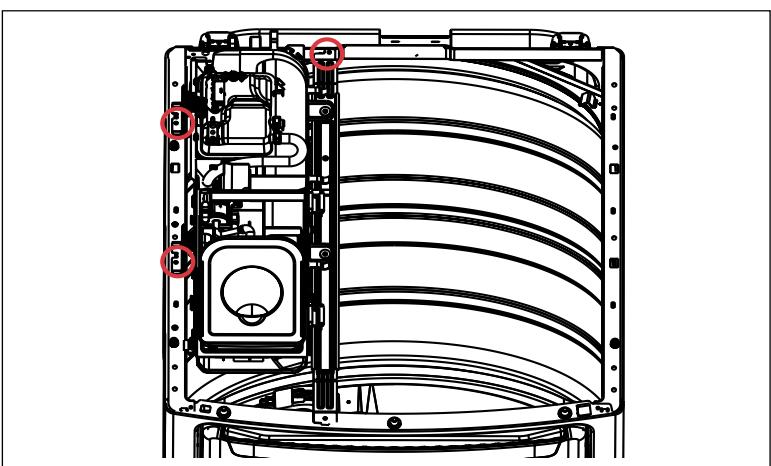


1. Open the top cover.



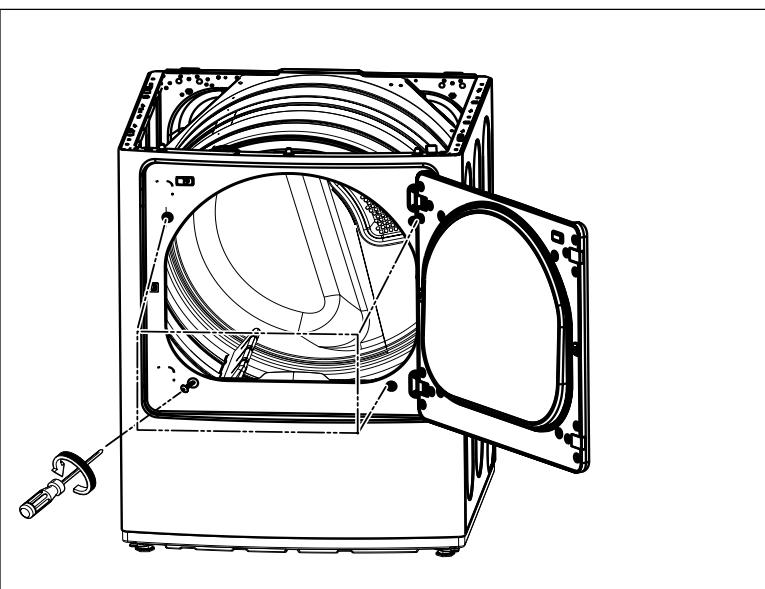
2. With a flat blade screwdriver, press the tabs on the side of frame body and gently take it out.

GUIDE ASSEMBLY

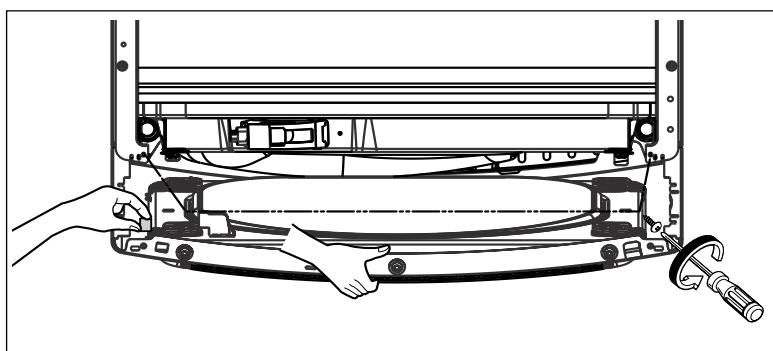


1. Disconnect wiring to the harness.
2. Remove 3 screws.
3. Pull out the guide assembly.

CABINET COVER

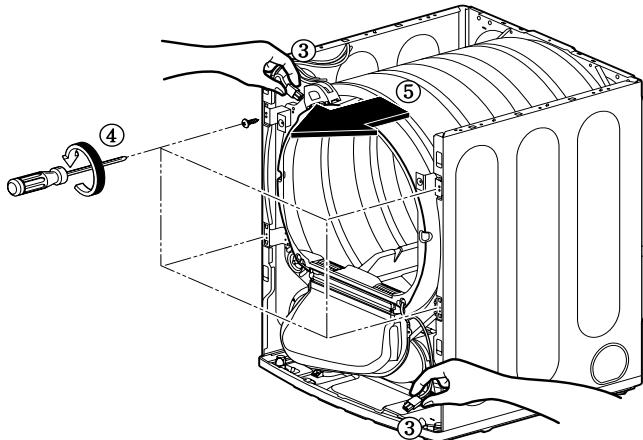


1. Open the door and remove the 4 screws from the cabinet cover then close the door.



2. Remove the 2 screws, then tilt the cabinet cover toward the front of dryer slightly.
3. Disconnect wiring to the door switch and lift the cabinet cover.

TUB DRUM [FRONT]

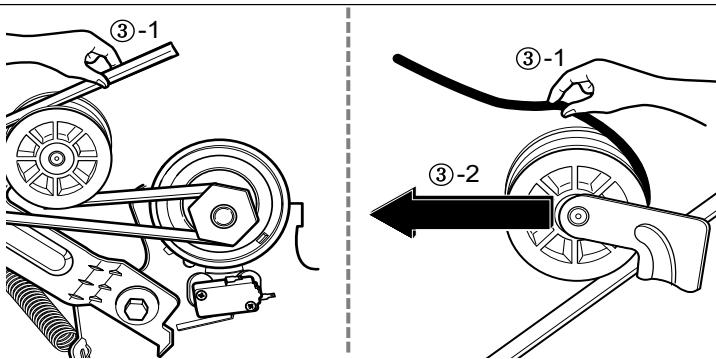


WARNING!

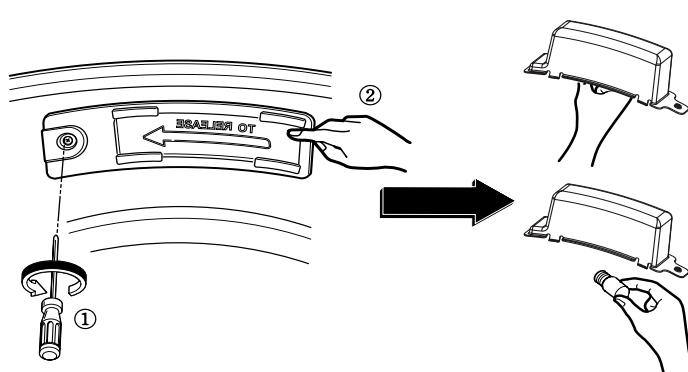
WHEN YOU DISASSEMBLY THE LAMP CONNECTOR, BE SURE TO TAKE GLOVES AND CAREFUL CABINET EDGE. FAILURE TO DO SO CAN CAUSE SERIOUS INJURY.

1. Disassemble the top plate.
2. Remove cabinet cover.
3. Disconnect the door lamp and electrode sensor connector.
4. Remove 4 screws.
5. Disassemble the tub drum [Front].

DRUM ASSEMBLY



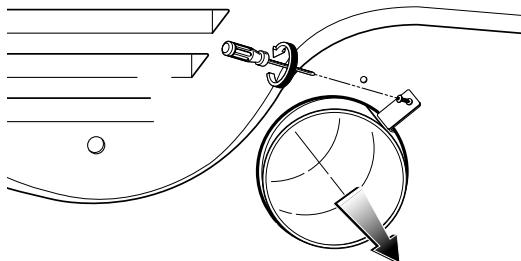
CHANGING THE DRUM LAMP



1. Disassemble the top plate.
2. Remove the cabinet cover and tub drum [front].
3. Loosen belt from motor and idler pulleys.
4. Carefully remove the drum.

1. Disassemble the door.
2. Hold the lamp shield in place while removing the screw.
3. Slide the shield up and remove.
4. Remove the bulb and replace with a 15 watt, 120 volt, candelabra-base bulb.
5. Replace the lamp shield and screw.

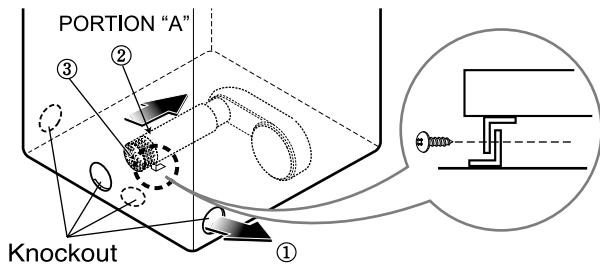
DRYER EXHAUST CHANGE



WARNING!

BEFORE PERFORMING THIS EXHAUST INSTALLATION, BE SURE TO DISCONNECT THE DRYER FROM ITS ELECTRICAL SUPPLY.

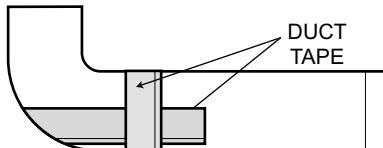
TO REDUCE THE RISK OF PERSONAL INJURY, ADHERE TO ALL INDUSTRY RECOMMENDED SAFETY PROCEDURES INCLUDING THE USE OF LONG SLEEVED GLOVES AND SAFETY GLASSES. FAILURE TO FOLLOW ALL OF THE SAFETY WARNING IN THE MANUAL COULD RESULT IN PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



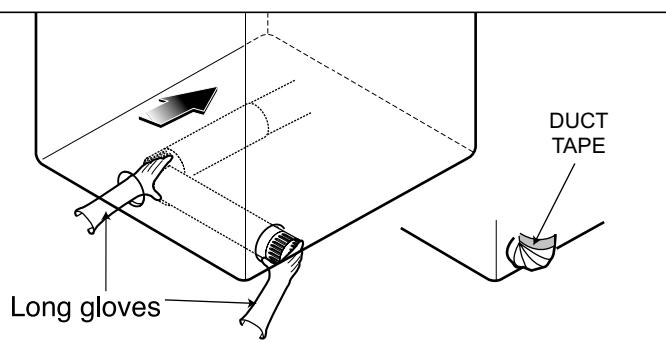
1. Remove a screw and the exhaust duct.

- 2-1. Detach and remove a knockout at the bottom, left or right side as desired. (Right side vent not available on gas dryer)
 - ①, ②, ③ the order of work.

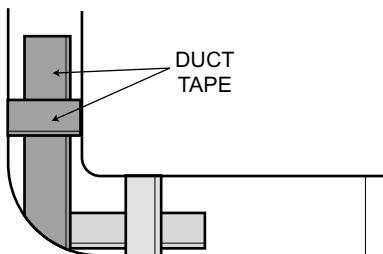
- 2-2. Reconnect the another duct [11 in (28cm)] to the blower housing, and attach the duct to the base. (Duct is a service part)



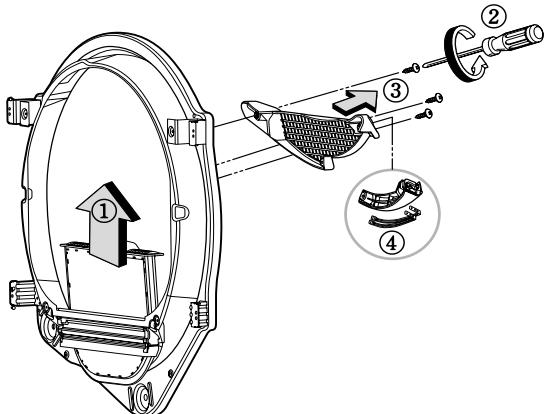
- 3-1. Pre-assemble 4" elbow with 4" duct. Wrap duct tape around joint.



- 3-2. Insert the elbow duct assembly through the side opening and connect the elbow to the internal duct.

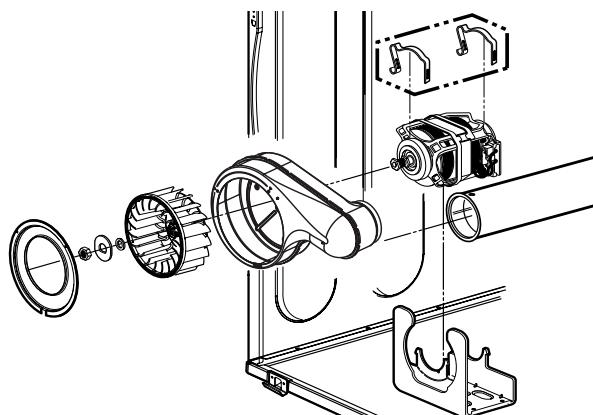


FILTER ASSEMBLY



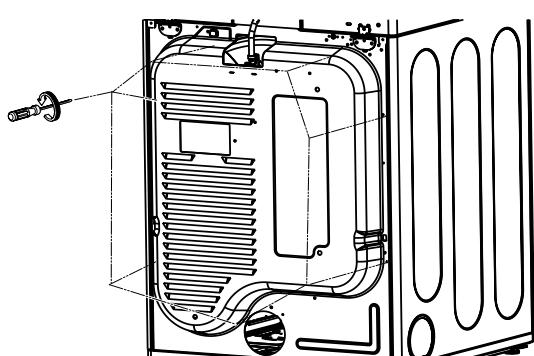
1. Remove the filter.
2. Remove 3 screws.
3. Remove the cover grid.
4. Disconnect the electrode sensor.

BLOWER HOUSING



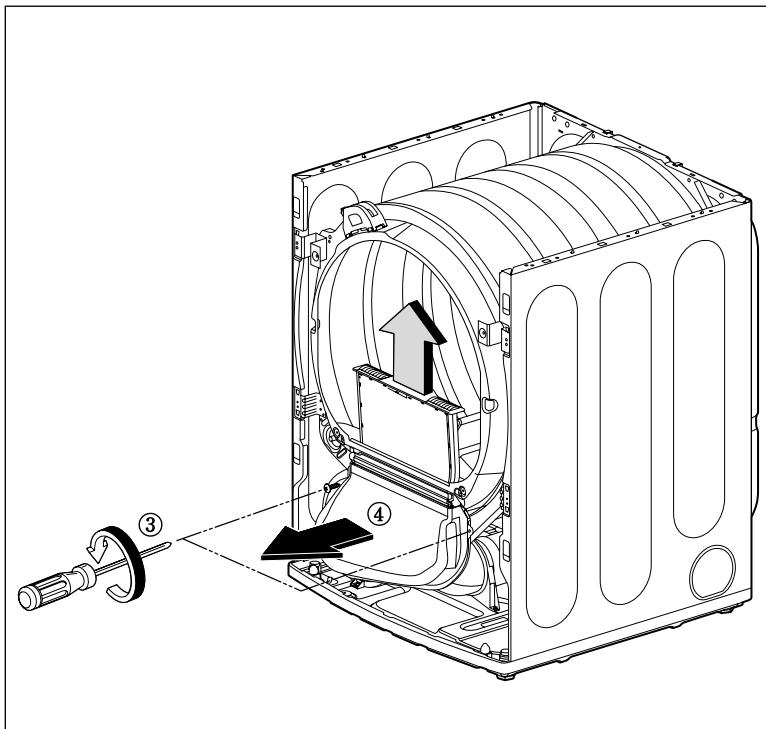
1. Disassemble the top plate.
2. Remove the cabinet cover and tub drum [Front].
3. Remove the drum assembly.
4. Remove 2 screws and cover (Air guide).
5. Remove the bolt and washer.
6. Remove the fan.
7. Disconnect the motor clamp and motor.

BACK COVER



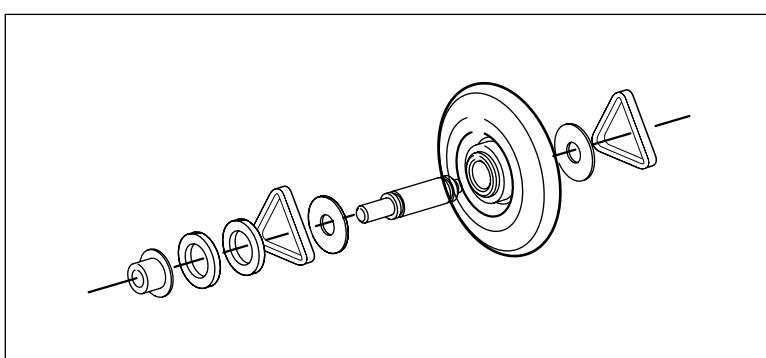
1. Disassemble the top plate.
2. Remove the cabinet cover and tub drum [Front].
3. Remove the drum assembly.
4. Remove 7 screws.
5. Pull the tub drum [Rear] towards the front.

AIR DUCT



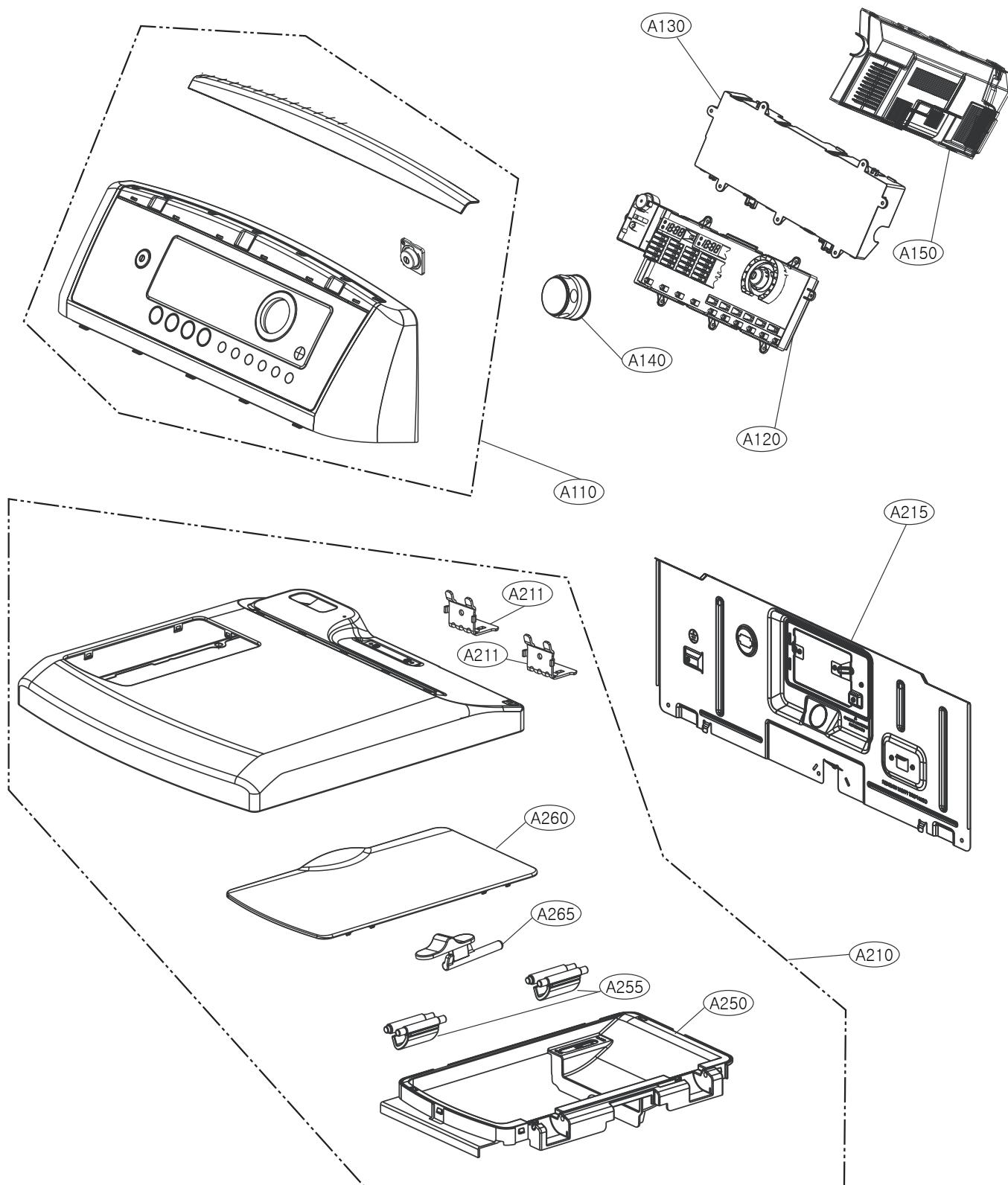
1. Disassemble the top plate.
2. Remove the cabinet cover .
3. Remove the filter and 2 screws.
4. Remove the air duct.

ROLLERS

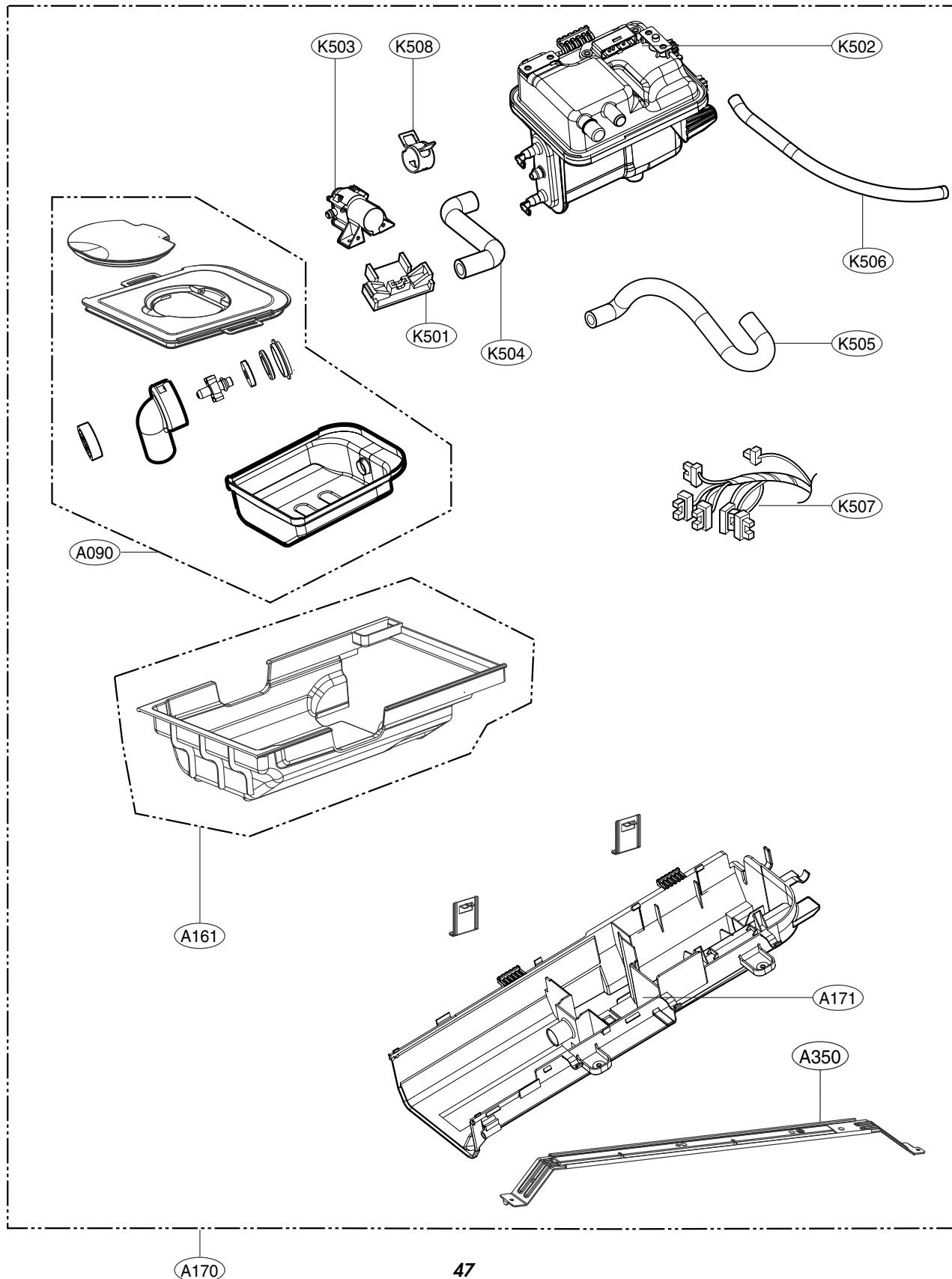


1. Disassemble the top plate.
2. Remove the cabinet cover and tub drum [Front].
3. Remove the drum assembly and tub drum [Rear].
4. Disconnect the air duct from the tub drum [Front].
5. Remove the roller from the tub drum [Front] and tub drum [Rear].

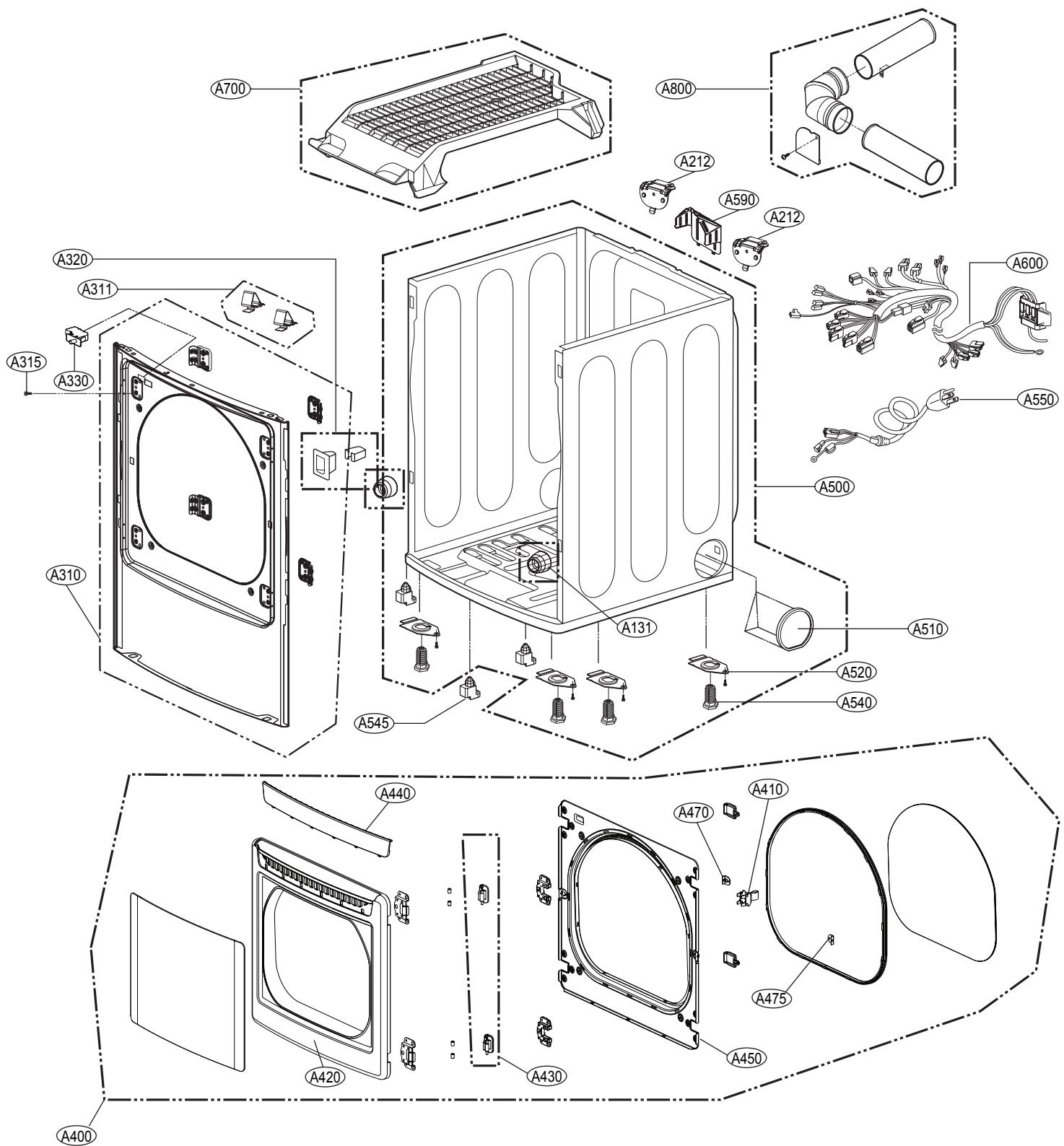
13-1. Control Panel & Plate Assembly



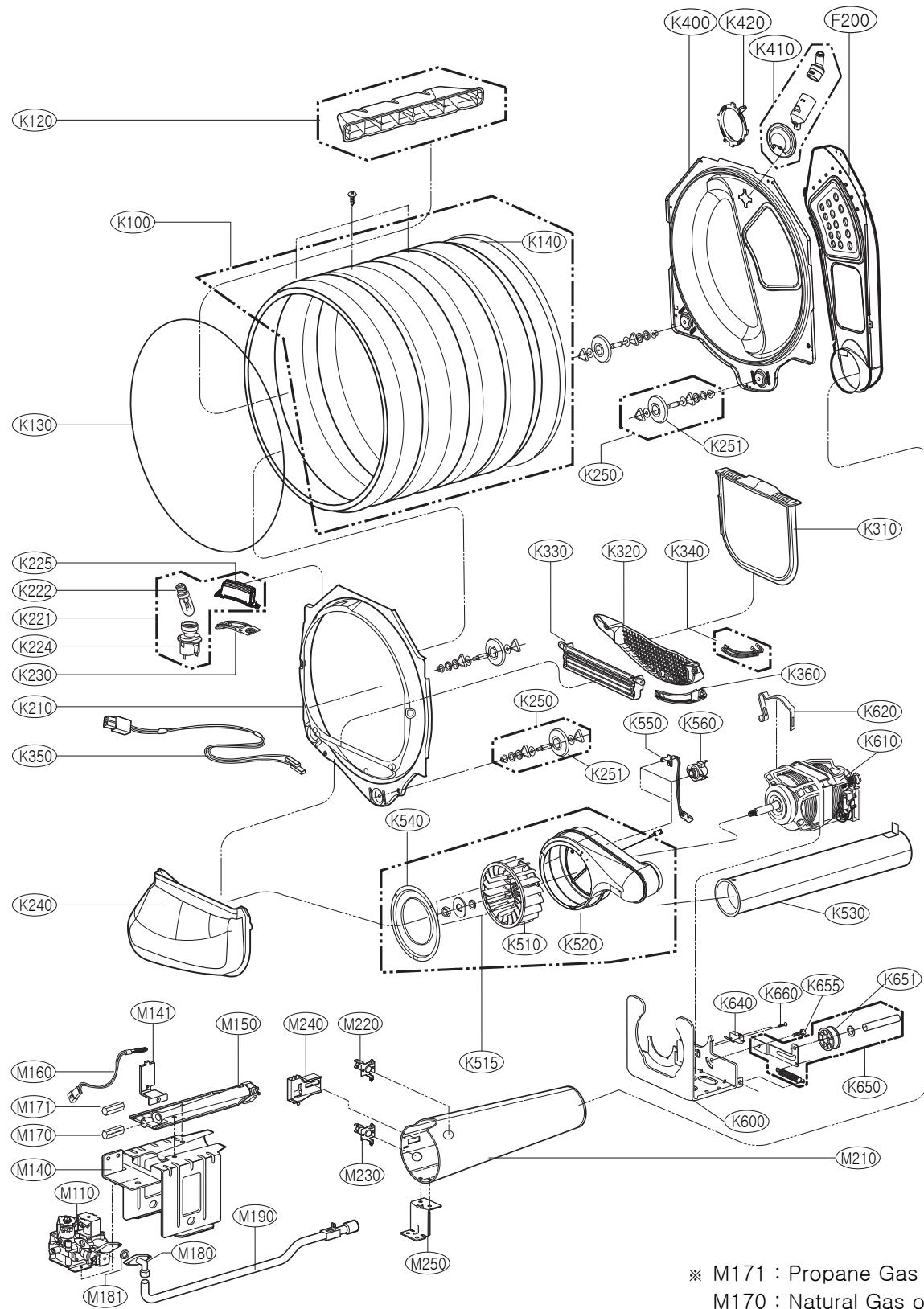
13-2. Guide Assembly



13-3-2. Cabinet and Door Assembly: Gas Type



13-4-2. Drum and Motor Assembly: Gas Type



※ M171 : Propane Gas orifice
M170 : Natural Gas orifice